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THE ENTREPRENEUR IN AMERICAN CAPITAL FORMATION

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ON THE BASIS of present historical materials, it is impossible to treat statistically the historical effect of entrepreneurs on capital formation in the United States. The most that the historian can do is to indicate some of the general outlines of entrepreneurial development, call attention to additional material that might be investigated more carefully, and suggest some relevant factors that have not in the past been much considered by theoretical economists.

Problems regarding the entrepreneur in capital formation do not differ greatly from those in general economic growth. This statement rests upon a definition of the entrepreneur as one who makes the sequence of decisions necessary for organizing and carrying on the supply of goods or services for profit. Such a definition may include members of boards of directors, salaried managers, and nonemploying business proprietors. It conceives of entrepreneurs as a broad social group employed in administering business, most of whose basic decisions are concerned with the allocation and use of capital. As generally defined in terms of increasing national product or real per capita income, economic growth also depends largely upon allocation and use of capital.

Kuznets has suggested six major questions around which the historico-statistical record of economic growth can be analyzed.[1] Four of his categories are concerned with (1) the precise composition of the industrial process, (2) the adjustment of the labor force, (3) the obtaining of requisite material and technological means, and (4) the disposition of the industrial products. The present discussion will be focused on the areas indicated in his two remaining questions: (5) "How was the expansion financed?—with particular reference to the sources of savings that financed accumulation of capital and the mechanisms that were evolved both to mobilize savings and to direct them into proper investment channels"; and

The author is indebted for suggestions and criticisms to Arthur H. Cole, Leland H. Jenks, and others at the Research Center for Entrepreneurial History at Harvard; Moses Abramovitz; Simon Kuznets; and Harold F. Williamson.

[1] *Problems in the Study of Economic Growth*, National Bureau of Economic Research, Special Conference Series, No. 1, mimeographed, 1949, p. 12.

(6) "Who were the active agents of industrialization—the carriers of technological change and the spearheads in the institutional and economic breaks that were the indispensable prerequisite and accompaniment of the industrial process—and what was their role in the conflicts that the impact of industrialization created within the economy?"

As Kuznets goes on to say, "Clearly each of the broad questions comprises a host of others." Leland Jenks holds that a general theory of society—specifically, some sort of sociology of change—is necessary to account for economic development. The role of the entrepreneur in capital formation and other activities is shaped by a combination of factors involving personality types, cultural attitudes, technological knowledge, and available physical resources. Merely to list these factors calls attention to the intangible character of all but one of them. The personality-culture complex may someday be segmented into measurable factors, but that achievement still appears to be far in the future. It may be easier, in fact, to find some measures or uniform aspects of the entrepreneurial role as a whole. But so far no indexes have met with any wide acceptance.

Turning to the supply side of the relationship, the amount of new capital available from either domestic or foreign sources may vary greatly in relation to national income. This subject has, of course, been pursued recently by many able scholars, and the model proposed here will no doubt seem oversimple. To try to distinguish the element of entrepreneurship or enterprise, however, it may be permissible to divide the factors that produce commercially usable credit into those dependent on the general culture and those directly responsive to entrepreneurial activity. Such a division must be seen simply as a heuristic device, since entrepreneurship itself is part of the general culture and habits of saving are no doubt altered by the returns on investment. But from the standpoint of this artificial division we may say that Americans had certain propensities to save, not directly the product of contemporary entrepreneurial activity, and that the creative role of the entrepreneur in capital formation was to mobilize existing savings, supply incentives for a higher rate of saving, utilize credit mechanisms that could lead to forced saving, and achieve productivity from the use of capital that would add to the national income and particularly to the supply of business savings. There are at least two types of entrepreneurial functions involved in the performance of this highly generalized role: those of the entrepreneur who acquires, allocates, and manages capital for actual production; and those of the financial agent who develops ways of raising capital for the use of others.

If history is to make its maximum contribution to any current problem it is usually necessary to go back to proximate origins and see existing institutions in earlier and simpler forms. The historian sees the activities of the big business manager of the twentieth century emerging from those of the industrial entrepreneur of the nineteenth, and these in turn against the background of earlier American agricultural and commercial culture. The historical technique gains in utility for present world problems from the fact that in relation to Great Britain the United States up to about 1850 was an underdeveloped area.

This continued colonial relationship in ideas, technology, and in most other aspects of the culture presents a case study, interesting because it differs so markedly from the relationship of advanced industrial and underdeveloped areas at the present day. Since American development has seldom been seen in terms of this analogy, there is probably something to be learned from looking at it this way.

1. *The Entrepreneur in Early America*

It is obvious from a cursory view of United States history that the nineteenth century entrepreneurs represented a high level of business energy. Statistical series document the rapid growth of American business and productivity, particularly during the period from about 1830 to the end of the nineteenth century. Of fundamental importance to an understanding of this period of tremendous growth is the fact that potential entrepreneurs came from the already economically well-developed nations of Western Europe. The immigrants to America were from Great Britain, Holland, Germany, France, and Sweden, where, either in rural or urban areas, they had in general been in contact with fairly advanced stages of trade and handicraft. The natives of America, the Indians, were slow in adopting capitalist culture patterns. But the immigrants, unlike the people of most underdeveloped areas today, had value systems already adjusted to capitalist needs and goals. The fact that the two early American colonizing agencies were companies designed to return profits to stockholders gave a business atmosphere to problems of settlement.[2]

To a greater degree than the European population as a whole, the

[2] See Wesley F. Craven, *Dissolution of the Virginia Company*, Oxford, 1932.

migrants represented heterodox minorities conditioned to searching for new ways of coping with their social and physical environment. In this country, Europeans found communities with relatively low man-land ratios and almost unlimited opportunity for increasing returns from the application of labor. As a result, a premium was placed on putting to use devices or methods that would save man-hours, regardless of their efficiency in relation to physical resources.

To some extent colonial society reproduced European feudal patterns and recognized class distinctions, but barriers to social mobility were relatively weak. The early comers, who presumably did much to set colonial culture patterns, were conditioned by the needs of relatively open-class pioneer communities. There was no great difficulty in achieving high social prestige through the acquisition of property within a man's own lifetime.[3] This raises the question of the extent to which this conditioning created an attitude of competitiveness, or what has later been called a class-status-prestige complex, stronger than that of the nonmigrating English or Continental peoples. Aside from business, including farming, the avenues for social prestige were relatively few and unrewarding. The salaried positions in the army and navy were held by British officers merely stationed here for a brief period. Similarly the highest offices of government were of British appointment and the church had no colonial hierarchy that led to such posts as canon, dean, and bishop. In the later years of colonial development there were relatively few opportunities to gain rapid wealth from the land. Thus trade and manufacturing necessarily became chosen avenues for social mobility.

Elements favorable to entrepreneurial activity appear to have resulted from the loose integration of American culture. Patterns disrupted by transplantation and to a lesser extent by competition with those of other cultures did not resume their old depth or fixity. This meant that the entrepreneur could restructure the culture more nearly to suit his ends. Ralph Linton, for example, has written of the innovator as a deviant personality in terms of deeply patterned cultures.[4] This was not necessarily the case in the United States. Since new environments and new possibilities in transportation con-

[3] See W. T. Baxter, *The House of Hancock*, Harvard University Press, 1945, and James B. Hedges, *The Browns of Providence Plantations*, Harvard University Press, 1952. Although Baxter is a professor of accounting, neither book has a satisfactory analysis of capital accounts. Merchants did not balance their books with a view to determining net worth.

[4] In *The Progress of Underdeveloped Areas*, Bert F. Hoselitz, editor, University of Chicago Press, 1952, p. 75.

tinuously forced change, innovators may well have had personalities that could be called normal to the culture.[5] In fact, if one uses the term broadly to indicate new methods not previously practiced by the particular group, innovation must have been frequent, once a certain stage of development was reached in the new American areas.[6]

Another factor favorable to the prestige and success of the entrepreneur was the lack of established leadership in new communities. The local merchant or manufacturer might readily occupy the power vacuum which existed because of the lack of well-established leading landowners and politically prominent families, such as characterized old settlements.

As business success came increasingly to be the avenue to social prestige, a large supply of men was available for entrepreneurial pursuits. In addition, many occupations that in a foreign nation would not have been regarded as entrepreneurial or conducive to innovation or expansion in capital investment turned out to be such in the United States. For example, an able man keeping a general store in a growing part of the United States usually had an eye on every local opportunity. As soon as he made a little money in the store, he spread out into other local enterprises and became, in a sense, a small-scale general entrepreneur. In good times, college professors, doctors, and lawyers all joined in the scramble for wealth —for the profitable allocation of capital.

Lewis Atherton's studies indicate the high social prestige and the subsidiary enterprises of general storekeepers even in the relatively static Deep South.

"Here," he writes, "there was a tendency to develop a position of great influence. While this was primarily economic in nature, it also frequently expressed itself in political terms. Membership on the local city council was quite common, an indication of mercentile influence in the rise of interior towns and villages. At least one storekeeper was generally to be found on city councils, and frequently the majority came from that occupation. Self-interest of course made the work attractive. When municipal ordinances covered

[5] There has been no historical study of personality types per se. This supposition might be tested from the many biographies, collected letters, and autobiographies of businessmen of the early nineteenth century. See Henrietta M. Larson, *Guide to Business History*, Harvard University Press, 1948.

[6] Modifying this is the fact that frontier communities with their cooperative labor practices tended to standardize procedures. See Donald McConnell, *Economic Virtues in the United States*, published by author, 1930, pp. 12 ff.

mercantile and peddling licenses, rates of drayage and the speed at which drays could travel, business hours, rules for the city market, inspection of weights and measures, fire regulations, and similar subjects, it behooved a storekeeper to exert himself to obtain an opportunity to participate in making the decisions. . . .

"Obviously the storekeeper devoted his attention primarily to his immediate business functions. As emphasized throughout this study, he provided the dry goods, groceries, and tools necessary for the operation of farmers throughout the South. In doing this, he served as a middleman between seaboard wholesalers and southern farmers, thus handling the generous and long-range credit which characterized the system. He bartered merchandise for farm crops, and by marketing the latter offered an outlet for southern farms.

"In the process of providing these basic economic services the storekeeper naturally contributed to other economic and social activities as well. In processing farm crops for market he provided an elementary type of manufacturing by operating subsidiary enterprises such as sawmills and gristmills. Banking, farming, transportation, and land speculation were all so closely related to his scheme of operation that he had to deal with the problems involved in each. Moreover, storekeepers constituted the central group in the development of interior villages and towns in the ante-bellum period."[7]

There are no equally comprehensive studies of small mill, shop, and financial enterprises in the more rapidly growing regions.

Eighteenth and nineteenth century America had subcultures with differing sets of values. These ranged all the way from that of backcountry people who had much of the cultural outlook of the Middle Ages still intact to the progressive business culture of Puritans and Quakers along the northeastern seaboard. In this latter culture frugality and saving were seen not only as manifestations of a proper life, but also as a means for acquiring more economic power that could be used for God's work. A foreigner viewing this segment of the culture in 1836 wrote, "There is, probably, no people on earth with whom business constitutes pleasure, and industry amusement, in an equal degree with the inhabitants of the United States of America."[8] These were the proper values for entrepreneurship and

[7] Lewis E. Atherton, *The Southern Country Store*, Louisiana State University Press, 1949, pp. 191-193. Quoted by permission. See also his *The Pioneer Merchant in Mid-America*, University of Missouri Press, 1939.

[8] F. J. Grund, *The Americans*, London, 1837., Vol. 2, p. 202. There is a voluminous literature of accounts by foreign travelers from which the char-

rapid capital formation. When carried westward by merchants, teachers, skilled workers, and transportation executives this "puritan" subculture came to dominate most of the nation.[9]

Another set of general conditioning factors is connected with the rapid geographical and demographical expansion in the eighteenth and nineteenth centuries. A high reproduction rate insured an expanding local population in almost every settled area. In addition to this, immigration was rapid after about 1845. These factors meant that, aside from a few declining agricultural areas in the East, a business started in almost any community would grow if it merely held its competitive position. The usual western promoter would have agreed with J. W. Smith of Hudson, Ohio that it was safe continually to add new business ventures, since as the town grew each would "support the other."[10]

2. *Capital Formation in the Nineteenth Century*

In the early phase of industrialization most initial financing was of local origin and there was an intimate relation between entrepreneurs and investors. Expansion of the business was usually financed by reinvesting profits. In this way the efficiency of the entrepreneur as a manager had a direct bearing upon the rate of capital formation. Harold F. Williamson has suggested that the desire to keep control of invested capital may have led entrepreneurs to favor reinvestment of earnings in their own firms rather than in more productive outside activities.

The rise of large-scale transportation and public utility enterprises from about 1820 on emphasized new methods of finance: widespread sale of securities and creation of bank credit. The first method raised the problems of entrepreneurial capital obtained from investors, without intimate knowledge of the properties named on their cer-

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acteristics of American culture might be reconstructed in a systematic way. Hunt's *Merchants Magazine, De Bow's Review*, and the *Bankers' Magazine* also contain articles on American business practices written by foreign (usually British) businessmen.

[9] McConnell's *Economic Virtues in the United States,* as cited, repays reading in this connection.

[10] This situation is indicated in the early pages of city and county histories. I found it to be the case with most successful local brewers. It is indicated in my *The Pabst Brewing Company* (New York University Press, 1948), but since Pabst was selling in the national market, expansion by reinvestment in the company was more attractive than in the case of the local brewery. Therefore, general investment activity came at a later stage in the career of Frederick Pabst.

tificates of ownership, and by impersonal appeals in one section of the country for capital to be invested in another.

Much ingenuity was required to raise enough capital to build cities and railroads at the rates that prevailed from 1830 to 1860. The population in cities over 8,000 increased from 4.9 per cent of the total in 1820 to 16.1 per cent in 1860, and the number of such cities from 13 to 141. From 1836 until the late 1840's, depression and debt repudiations retarded the raising of capital for railroad construction, but in the decade of the 1850's the United States laid down more than 20,000 miles of track.

Capital for these ventures was raised by a series of devices in which the role of entrepreneurship is often hard to distinguish from that of government responding to public pressure. The means represented a mixture of techniques both borrowed from Europe and originated in the United States: (1) Commercial banks bought stocks for their portfolios.[11] On occasion, states forced banks to invest in internal improvements in order to gain renewal of their charters. (2) Commercial banks extended renewable loans or demand loans secured by stock to various business enterprises, particularly railroads. These loans became in effect a part of the capital structure of the road, and were ultimately paid off from the sale of securities. (3) Development banks were chartered by the states for the express purpose of issuing notes that could be used to build internal improvements. Occasionally, railroad companies were granted banking privileges to enable them to issue their own notes. (4) Real estate companies were associated regularly with the construction of railroads and often with the starting of factories.[12] Since the improvement projected promised an almost certain rise in surrounding land values, large investors could be forced to buy stock in the railroad or manufacturing company in order to be included in the land company.[13] (5) Construction companies, again

[11] For material on this and other aspects of the mechanics of investment in the nineteenth century see Fritz Redlich, *The Moulding of American Banking*, Hafner, 1951, Vol. 2. His book contains the only adequate account of the rise of investment banking.

[12] For examples of real estate companies in manufacturing finance see George S. Gibb, *The Whitesmiths of Taunton*, Harvard University Press, 1943, and Charles W. Moore, *Timing a Century*, Harvard University Press, 1945, both in the Harvard Studies in Business History.

[13] There is plenty of material on railroad finance and promotion and the early history of railroad companies; for an introduction see Frederick A. Cleveland and Fred W. Powell, *Railroad Promotion and Capitalization in the United States*, Longmans, 1909.

promising a more certain and immediate return than the improvement that was being constructed, could often raise equity capital or loans when the transportation company could not. (6) State and local governments put up large sums for the purchase of railroad and canal securities, generally through the sale of their own bonds, and insofar as these investments were not serviced by the improvement company the burden was borne by taxation.[14] (7) Entrepreneurs also persuaded some of the states, such as Georgia, Pennsylvania, and New York, to build major railroads or canals at state expense.[15]

In this broad capital-raising process the difficulty in distinguishing between general cultural factors and those specifically connected with the pattern of entrepreneurship becomes obvious. One might say it was an entrepreneurial culture. In fact, it is hard to distinguish between entrepreneurs and the rest of the population. From the demands of their function, the entrepreneurs were presumably the men of energy and imagination, along these material lines, and they educated the rest. The rise of a belief in material progress and of a willingness to make present sacrifices for future material rewards had been going on since the colonial period.

The economic returns from improved transportation were so high and widespread, particularly in interior communities previously cut off from markets, that such improvements became a major goal.[16] Local people were ready to make sacrifices to secure transportation and unquestionably dreamed of benefits that exceeded the ultimate reality. The people of Oswego, New York, for example, were said to be "unanimous for anything in the form of a railroad whether it goes crooked or straight they seem to have no care."[17] When the capital required exceeded that which could be raised by local

[14] Harry M. Pierce contends that when governments invested in railroad securities at prices that could not have been obtained in the open market, the difference between the government and the market price was a subsidy. *Railroads of New York: A Study of Government Aid, 1826-1875*, Harvard University Press, 1953, pp. 20-21.

See also Carter Goodrich and Harvey H. Segal, "Baltimore's Aid to Railroads," *Journal of Economic History*, Winter 1953, pp. 2-35, and Milton Heath, "State Aid to Railroads in the South," *Journal of Economic History*, Supplement x, 1950, pp. 40-52.

[15] There was also some financing of internal improvements by lotteries. See H. J. G. Aitken, "Yates and McIntyre: Lottery Managers," *Journal of Economic History*, Winter 1953, pp. 36-57.

[16] See Leland H. Jenks, "Railroads as an Economic Force," *Journal of Economic History*, May 1944, pp. 1-21.

[17] Pierce, *op. cit.*, p. 42.

entrepreneurs, they joined with investors in efforts to secure state aid.

Between 1835 and 1840 Illinois illustrated the excessive public investment in a frontier area produced by a combination of popular demand, persuasive entrepreneurs, and a great boom period.[18] Encouraged by a federal land grant of 290,914 acres, the legislature in 1835 authorized a $500,000 bond issue to finance a canal between Lake Michigan and the Illinois River. As security for the bonds, the state pledged the federal land and the canal tolls.

But this was only a beginning. The full force of the boom psychology struck the state in 1836 and 1837. Land near the Chicago end of the canal which had remained unsold at $1.25 an acre less than ten years before now sold as high as $20,000 for a building lot. Caught in the excitement of the early months of 1837, the legislature established a comprehensive system of internal improvements. Seven railroads were to be built at once, each starting from an intersection with a navigable river, and construction work was to progress simultaneously in both directions! Navigation of the major rivers within the state was to be improved, and $200,000 was earmarked for compensation to counties in which no railroad or river improvements took place. An issue of $8,000,000 in 6 per cent bonds, salable only at par or above, was provided to pay for the state system. Needless to add, the depression which commenced in mid-1837 resulted in abandonment of most of the work and default on the bonds.

Each new tier of western states went through such periods of overoptimism and overinvestment, in either the 1830's, the 1850's, the 1870's, or the 1880's, and private enterprise followed the same pattern. R. Richard Wohl has written a case history showing a boom-time pattern of mid-nineteenth century private investment.[19] His account is especially interesting because it illustrates the tendency of the optimistic business atmosphere to turn American professional men into entrepreneurs. Wohl's leading figure, Henry Noble Day, was a professor in the Western Reserve Theological Department at Hudson, Ohio to whom the boom of the early 1850's brought dreams that his village would become a great railroad center. Day's conversion to business life was aided by the fact that education did not share in the flush times. The closing of the Theological Depart-

[18] See Reginald C. McGrane, *Foreign Bondholders and American State Debts*, Macmillan, 1935, pp. 102 ff.

[19] R. Richard Wohl, "Henry Noble Day," in *Men in Business*, William Miller, editor, Harvard University Press, 1952, pp. 178-188, *passim*. Quoted by permission.

ment in 1850 just as the railroad from Cleveland was nearing Hudson ended Day's teaching. He justified his transition to full-time entrepreneur in Calvinistic terms: "The characteristics which Christianity in its present stage seems to require are chiefly vigor of invention, skill in execution and subscribing to the true end of industrial arts—utility."

As in most western towns the railroad seemed the key to unlimited prosperity. Before the Cleveland and Pittsburgh even reached Hudson and years before any through connection to the East, Day was chartering branch lines and planning a transcontinental system through the town.

"But for Henry Day himself the dream he had for Hudson had become a sacred reality. He was able to anticipate its completion when the first few spadefuls of earth were taken out for grading. He proceeded therefore to enact the logic of his expectations. He began to create a network of businesses in Hudson to service the demands arising out of the railroad building boom and to cash in on the enlarged market which would result once the roads were completed. . . .

"In 1849, Henry Day began what was to be the seat of nearly a dozen separate businesses. That year he approached Western Reserve College for a loan of $1,500 with which he would undertake to construct a large commercial building. Since the railroad was to come shortly to Hudson, there would be a great demand for business floor space, of which there was hardly any available in the town. Against the loan he would pledge the lot on which he intended to erect the structure. In addition, he would pay the going rate of interest and retire the loan as rapidly as he could.

"No sooner had he begun the actual building when his plans for the structure were enlarged into something far grander. Less than a year later, the [un]completed building had exceeded its planned cost of $3,000. . . . Before the structure was completed to his satisfaction it had swallowed up $18,000, although the source of this capital remains to this day a mystery which cannot be solved from the tangled, incestuous financing which prevailed in Henry Day's enterprises.

"The structure was a magnificent aberration, entirely out of scale with the relatively small, low buildings which filled the rest of the village. It was a five-sided, three-story edifice—an earlier Pentagon—and was soon packed full of a collection of businesses at the bottom of each of which was Henry Day, impartially providing capital, plans, and enthusiasm. . . .

"In the meantime the projected railroads brought a great stream of cash and hundreds of workers into Hudson. Of the $200,000 pledged for the Clinton Railroad, $18,000 was expended within Hudson itself, a proportion far greater than it appears, since many of the subscriptions to stock were made in the form of lands, not cash. The numerical expansion of the population also created a host of new problems which boomed business. The greatest demand was for shelter and Henry Day proposed to meet it with a vertically integrated scheme for new housing.

"One of the greatest benefits of the railroad boom, its protagonist argued, was to be the enhancement of local land values. Hence Henry Day, associating himself with the most powerful elements in the community, purchased—on credit, of course—large tracts of land outside the main area of settlement in the town, but immediately adjacent to it. Here—in what he labeled 'Day's Addition'—he proposed to rear the housing which was to accommodate the present increase in population as well as the further additions which would surely come after the railroads were fully built. To finance construction and sale of his houses, Day conceived a special kind of banking organization, the 'Hudson Society for Savings.'"

The main sources of capital for the Day companies were the enterprises of his relatives. He drew on the working capital of New York and southern trading and banking companies and on family wealth accumulated from earlier mercantile ventures in the East. In this way eastern credit was stretched to the utmost for Ohio improvements. The result, as in many similar instances, was collapse of the whole structure in the business recession of 1854.

In Day's case and many others, including state-financed ventures, most or a large part of the capital prematurely invested was lost. The railroad culverts melted away as farmers "borrowed" the stones, and the grading reverted to humps in the pastureland. But there were nearly similar cases where the bad initial estimates, the "entrepreneurial errors," as John E. Sawyer has called them, led to the construction of ultimately valuable works that would not have been undertaken or continued had the true costs and difficulties been known in advance or at an early stage. Sawyer writes that "Once in operation, to fit our conditions the project must have proved to be such—according to the definition chosen, such a contribution to the economic development of the community or such a source of profits to its owners—as to have more than justified the total cost. That it paid off in any form means, of course, that the error in estimating costs was at least offset by a corresponding error in the estimation of demand."[20]

He cites as well-known instances the Welland and Middlesex Canals, the Hoosac Tunnel, and the building of Sault Ste. Marie, Michigan. In the latter case Francis H. Clergue built an industrial community with power, pulp and other mills, machine shops, foundries, nickel mines, iron mines, railroads, charcoal kilns, and finally a large-scale steel industry in advance of any local or otherwise established demand. Sawyer concludes: "Here capital was progressively, and more and more unwillingly, poured into a lasting exercise in economic development that proved a near miss from the point of view of its investors; but which was then so far under way that the 'high social cost of abandonment' enabled it to command transitional public funds when crisis came to the over-extended empire."

As the foregoing examples have illustrated, acute scarcity of local capital in western communities did not prevent the coming into being of an excess of capital equipment. In the upswings of the business cycle there was a continuous trend toward overexpansion. Business buildings were bigger and more numerous than the trade warranted, railroads were built ahead of traffic, and factories were started before there was an adequate market. The successful local man would likely engage in more enterprises than he could effectively manage. But such excessive activity led to a continuous movement of workers, either manual or white-collar, into the entrepreneurial ranks. This, in turn, meant that entrepreneurs were recruited from a very large percentage of the total population and that there was a good deal of movement into and out of entrepreneurial activities.

Vigorous individual entrepreneurship may necessarily have a high ratio of miscalculation and failure, a high ratio of entries and exits. American entrepreneurs like R. H. Macy and Cyrus McCormick failed in their early ventures, and many successful companies have been through one or more bankruptcies. Managerial know-how, essential to ultimate capital formation, was learned at the expense of empty-handed creditors.

3. *General Entrepreneurs in the Nineteenth Century*

It has seemed convenient to refer to the men who organized and controlled multifarious enterprises as general entrepreneurs. The

[20] John E. Sawyer, "Entrepreneurial Error and Economic Growth," in *Explorations in Economic History*, May 1952, pp. 200 and 203-204. Quoted by permission.

criteria of general entrepreneurship is that the man should not immerse himself in the details of management in any single enterprise, but that alone or in cooperation with similar operators he should control a number of enterprises in diverse, but not necessarily unrelated, lines of business. A man like Erastus Corning of Albany traded in hardware, manufactured iron, controlled railroads, and was president of a bank that supplied credit for such enterprises.[21]

General entrepreneurs operating regionally or locally formed an important link between the creation of credit and productive enterprise. As presidents or directors of banks they were in favored positions for negotiating loans. Sometimes "secured" by the stock of the enterprise involved, more often merely by one- or two-name paper, bank loans were frequently the source of both fixed and working capital. During boom periods the imaginative ventures of these entrepreneurs, such as Henry Day, undoubtedly drew bank credit far in excess of local savings into long-term construction[22] and by the resulting inflation taxed the rest of the community for the benefit of faster capital formation.

By the same mixture of enthusiasm and ability, entrepreneurs in control of large ventures drew upon the capital resources of Europe. This took place in two ways. First, since men like Cornelius Vanderbilt, Henry Villard, Nathaniel Thayer, or John Murray Forbes were known to foreign bankers, their participation in a venture was a sufficient guarantee to attract foreign capital.[23] Second, these men and their companies advertised the West and its farming land. This attracted immigrants with capital in cash or skill.[24] At the least, the economy gained an able-bodied adult worker without having to pay for his upbringing. At the most, the economy might gain the transplantation of a going enterprise, either agricultural or industrial, from Europe to America. For example, the Bests who started the Pabst Brewery moved their business from Mettenheim in the Rhenish Palatinate by selling their brewery and building a new one with the proceeds in Milwaukee, Wisconsin.[25]

21 Irene Neu, thesis on Erastus Corning, Cornell University, 1948.

22 Jenks, *op. cit.* See also his *The Migration of British Capital to 1875*, Knopf, 1927.

23 See Thomas C. Cochran, "The Legend of the Robber Barons," *Pennsylvania Magazine of History and Biography*, July 1950, pp. 311 ff.

24 Charlotte Erickson is working on a thesis at Cornell on the recruitment of labor from foreign countries in the nineteenth century.

25 Cochran, *The Pabst Brewing Company*, as cited, pp. 1 ff.

The general entrepreneurs played a major role in reshaping the American environment to fit their needs. Small groups of them in Boston, New York, and Philadelphia promoted and organized most of the large privately owned transportation and public utility enterprises. They saw the possibilities, and paid the lobbyists needed to secure charters for the major company and for attendant development and construction companies.[26] Their subscriptions to stock and bonds, in either the main company or the construction company, provided a considerable part of the initial funds and gave the banks with which they were connected the confidence to extend loans.

It seems probable that the eastern groups of general entrepreneurs, with their relatively good command of capital and their over-all view of situations, undertook long-range development more rapidly than institutional or local interests would have. For example, before the Michigan Central reached Chicago the Boston and New York entrepreneurs responsible for its finance were already planning for a western connection; and before the western connection, the Chicago, Burlington, & Quincy, reached the Mississippi the same entrepreneurs were projecting an extension across Iowa.

Entrepreneurs interested in politics, like Stephen A. Douglas, secured a policy of assisting railroads by federal land grants, delivered through the states from 1850 to 1860 and directly from the federal government to projected transcontinental lines from 1862 to 1871. These aided greatly in attracting domestic and foreign capital to railroad construction.[27] Investors who might be skeptical about the immediate earning power of a railroad across the prairies had faith in the ultimate value of the farming land. This seemed particularly true of foreign investors. The land grants undoubtedly drew otherwise unavailable money from England and Continental Europe into projects like the Illinois Central and the Northern Pacific.[28]

State and local credit also played a major part in starting the canal and railroad transportation system. With considerable oversimplification, one might distinguish two stages in the early development of both finance and transportation: a first stage in which finan-

[26] Thomas C. Cochran, *Railroad Leaders, 1845-1890*, Harvard University Press, 1953, p. 194.

[27] Thomas C. Cochran, "Land Grants and Railroad Entrepreneurship," *Journal of Economic History*, Supplement x, 1950, p. 62.

[28] See Paul W. Gates, *The Illinois Central Railroad and Its Colonization Work*, Harvard University Press, 1934, and James B. Hedges, *Henry Villard and the Railways of the Northwest*, Yale University Press, 1930.

cially weak entrepreneurs sought the aid of the state and local governments and welcomed state-owned enterprise as a needed supplement; and a second stage in which stronger general entrepreneurs bought out the government-owned enterprises, retired government-owned securities, and proceeded on a private enterprise basis. The dividing line between these stages depended largely upon the sums required by the projected enterprises in relation to the local supply of capital and the probability of immediate returns. In the East there were few new state activities after 1850, although local subscription to stocks and bonds continued into the 1870's.[29] In the Mississippi Valley state enterprise continued through the 1850's and farther west, state and federal aid was common until the panic of 1873.

The greatest demands for capital between 1850 and 1890 came in connection with railroad construction. According to the admittedly inaccurate capital estimates of the federal census there was $533 million invested in manufacturing (including hand and neighborhood industries) in 1849 and only $318 million in railroads. By 1889 the two sums were $6,525 million in manufacturing and $9,680 million in railroads. Henry Adams said, "My generation was mortgaged to the railroads and nobody knew it better than that generation itself."[30] Negotiating and servicing this mortgage constituted the greatest achievement of nineteenth century American entrepreneurs in the field of capital formation.

The feat of assembling nearly $10 billion in capital, largely through the security markets, should not obscure the fact that some of this capital and much of the $6.5 billion credited to manufacturing were the result of reinvested earnings. In industry, marketing, and agriculture, entrepreneurs created capital through successful management that brought in large earnings, coupled with low salary levels and small allocations to dividends or paid-out profits. During the first twenty years of the corporate history of the Pabst Brewing Co., for example, over 75 per cent of net earnings were reinvested and less than 25 per cent paid out in dividends. Up to 1889 the president and vice-president of this company, which was by then worth $5,000,000, drew salaries of $2,500 a year.[31] Other studies in

[29] See Pierce, *op. cit.*, Chap. I.

[30] Henry Adams, *The Education of Henry Adams*, Houghton Mifflin, 1930, p. 240.

[31] Cochran, *The Pabst Brewing Company*, as cited, pp. 84 and 94.

company history indicate that this picture is probably representative of family and other closely owned companies.

4. *Entrepreneurs in Banking*

So far the emphasis has been on the promoters and managers of enterprise, but the supply of capital for internal improvements was also a function of entrepreneurship in the field of banking, a product of manipulation and innovation in the mechanics of money and credit.

Redlich has covered the development of entrepreneurship in United States banking so throughly in his *Moulding of American Banking* that it is necessary only to summarize his findings here.[32] Between 1800 and 1850, American financial entrepreneurs developed institutions to encourage saving and to collect such funds in usable pools. Chartered commercial banks, which had first appeared in 1780, spread rapidly during this period, and savings banks, building and loan associations, and life insurance companies were started. While most of the investment from the latter three types of pooled savings was in urban mortgages, this in turn released other credit for manufacturing and transportation investment.[33]

Laws against branch banking in many states, and the willingness of state legislatures after 1815 to charter banks, led to a great spread of small banking units run on an experimental basis by local entrepreneurs. In 1840 there were 900 banks; by 1861 the number reached 1,600. While there were various state stipulations regarding reserves, taken as a whole the system was capable of expanding credit both rapidly and unwisely. The unwise advances, in turn, led to bank failures and the temporary prostration of local business. Whether a few large banks with branches, such as exist in most European nations, would have produced a more rapid economic growth can probably never be decided. These thousands of banking entrepreneurs lacked expert skill in assessing risks and were therefore likely to be bound by custom in extending credit, but they were close to the needs of their local communities, and they were no doubt influenced by the risk-taking spirit of the local businessmen.

The other major development of this period was the beginning of specialized investment banking. In the early nineteenth century

32 The Redlich work has been cited. See also Ralph W. Hidy, *The House of Baring in American Trade and Finance*, Harvard University Press, 1949, and Jenks, *The Migration of British Capital to 1875*, as cited.

33 Roy A. Foulke, *Sinews of American Commerce*, Dun & Bradstreet, 1941, pp. 89-150.

the American agencies for selling securities were numerous and unspecialized. Securities might be contracted or negotiated for by incorporated commercial banks, private banks, general enterpreneurs, foreign bankers or their agents, brokers, or traveling salesmen. Most of these middlemen hoped to sell all or a large part of the securities abroad. The close connections between American and British financial markets gave investment in the United States a different aspect from the buying of securities in other underdeveloped areas. The chief British houses, such as Baring Brothers, Thomas Wilson, or the Rothschilds, had either trusted correspondents or agents in this country. Englishmen were used to appraising American commercial risks and readily shifted to appraising the risks of publicly or privately financed transportation.

The good standing of American state securities in the British market, prior to the defaults of 1841, was one reason for the extensive use of state credit for financing banking and transportation. By 1847, state debts, largely contracted in aid of transportation, totaled \$224 million.[34] From about this time on, London provided a fair market for issues of the larger American railroads, while the standing of state securities was still depressed by defaults. As a result, well-sponsored railroads found their own bonds more salable than those of most of the states.

But the foreign market was not available to small transportation companies and public utilities or to American manufacturing enterprises. Local money-raisers resorted to many devices. Lotteries, improvement banks, building and loan companies, and mortgage banks all appeared within the first two decades of the nineteenth century. Some of these, such as western improvement or mortgage banks, were schemes for monetizing debt and then gradually passing the obligations eastward. Underlying this ingeniousness in creating credit were a faith in the immediate profitability of applying capital to many processes and a confidence in the general devotion to the goal of money-making.

Throughout the period before the Civil War, commercial banks were both buyers and middlemen in the investment security business. The Bank of the United States of Pennsylvania, during its brief career following the end of the federal charter in 1836, took a leading part in security negotiations. The companies chartered under various state "free banking" acts also participated in investment business, particularly in state and municipal securities.

[34] Redlich, *op. cit.*, p. 344.

With the rapid spread of railroads and gas and water companies, private bankers found their investment business becoming more important in relation to the old stand-bys of note brokerage and foreign and domestic exchange. August Belmont, as American agent for the Rothschilds; Prime Ward & King; George Peabody; Drexel; Brown Brothers; E. W. Clark; Corcoran & Riggs; and Vermilye were among the houses that became sufficiently specialized to be called investment bankers in the years before the Civil War.

The federal flotations of $2.5 billion in public debt during the Civil War resulted in a new maturity for American financial markets. The handling of the contracting, selling, and refunding of these issues built up a few specialized houses that, with the exception of Jay Cooke & Co., were to dominate the security markets in the United States for the next sixty years. In the post-Civil War period, as in earlier years, the strength of houses such as Drexel-Morgan, J. & W. Seligman, or Kidder, Peabody lay largely in good foreign connections, while the fatal weakness of Jay Cooke was his failure to establish real strength in London, Paris, Berlin, or Frankfurt.

Between 1865 and 1880, American investment banking entrepreneurs developed the underwriting and selling syndicate and the practices of banker leadership and responsibility in the affairs of their major clients. It is hard to estimate the effect of these practices on capital formation. Cooperation in selling syndicates probably mobilized more of the nation's savings for large-scale projects than might have been reached through the earlier, less highly organized efforts, but research would be needed to demonstrate this.

Still harder to judge is the effect of banker leadership, as illustrated by J. Pierpont Morgan. From the late 1870's on, Morgan asked for and received representation on the boards of certain railroads that he financed; by the middle 1880's he insisted on companies retaining the services of the syndicate leaders responsible for outstanding issues, at least in the case of his own clients;[35] and by the 1890's he was initiating reorganizations and mergers of railroads and industrial companies. Morgan's efforts probably drew more foreign capital into the United States than would have come otherwise, but the effect of his plans was often to check the rate of expansion of a road or an industry so that new commitments would not endanger the servicing of senior securities. Other leaders in the investment banking field operated in much the same fashion. These bankers also tended to share the view that monopoly created stability and a

[35] Cochran, *Railroad Leaders, 1845-1890*, as cited, p. 71.

well-ordered economy, whereas competition was upsetting and dangerous.

5. *Factors Retarding Capital Formation in the Nineteenth Century*

While nineteenth century American culture appears to have been one of the most favorable in world history for entrepreneurial activity, there were certain negative elements stemming either from the general environment or from the attitude of certain groups of entrepreneurs. Insofar as these elements curtailed or reduced the vigor of creative entrepreneurial activity, they may be assumed to have hindered capital formation.

One type of hindrance to effective entrepreneurial action was maladjustment between labor supply and demand. With the shifting of industry resulting from technological change, adjustment in the case of labor presumably never approaches close to perfection, but the process of internal westward growth and European immigration to the eastern seaboard imposed unusual difficulties on the United States. The decline of agricultural activities after about 1830 in parts of the Northeast and an already large population tended to produce a regional surplus of native-born labor. From the 1840's on, immigrants arrived in the eastern ports at a rate generally in excess of the growth of opportunities for local employment. How to draw effectively upon these pools of labor was an entrepreneurial challenge throughout the last half of the nineteenth century. Entrepreneurs tried a number of expedients. Associations were formed in the 1850's to move labor westward, chiefly at the expense of employers interested in western ventures. The difficulty with this device was lack of any guarantee that the laborer would arrive and work satisfactorily to repay the cost of his transportation. Some samples of the numbers actually moved make it appear that most entrepreneurs regarded the risk as too great. Railroad entrepreneurs made arrangements to move workers westward for their own purposes, often with land as an ultimate reward for fulfillment of the labor contract. Western states and territories, anxious to gain population, established eastern and European agencies to encourage migration. From the Civil War on, some companies made a business of importing Asiatic or European workers under contract, but the practice was prohibited by acts of Congress in 1882 and 1885, respectively. The extent to which these devices equated supply and demand has still to be investigated.

A second set of possible retarding factors stemmed from sectional and local rivalries and ambitions that led entrepreneurs or their political representatives to sacrifice the general to what seemed the special welfare. Part of the division of opinion came from geographical position, and part from differing types of entrepreneurship. The large export agriculturist thought in terms, and had real economic interests, different from those of the protected small manufacturer. Geographical-occupational cleavages led not only to conflicts over national policy, but also to a rather general preference for locally instead of centrally controlled activities. Sometimes Congress was swayed by local interests from all parts of the nation, as in state banker opposition to central banking; at other times the interest represented might be more strictly sectional, as illustrated in the New England fear of loss of labor due to more liberal land laws.

Here again the effects of these pressures on capital formation have never been determined. Although central banking, for example, would have given businessmen a uniform currency and solved some domestic exchange problems, it would also have tended to curtail credit inflation, which was one of the important factors in capital formation during the sharp upswings of the business cycle. It is hard to tell whether the entrepreneurial pressure that contributed to the writing of federal land laws in 1785 and 1796, under which very little land was sold, had any considerable effect on the westward movement, since the surrounding states had ample land for sale on favorable terms. If the laws did check migration, it is also hard to tell what effect this had on economic growth.[36] The eastern business argument that labor was needed there for commerce and industry and that western investment under existing conditions of transportation was lost to the national economy undoubtedly had some truth.

The planter-entrepreneurs who represented the slave plantation system in Washington on many occasions blocked policies that might have aided industrial capital formation. The most obvious issue involved was the protective tariff. Except in 1816, the South was opposed to protection, and, aided by northern railroad and commercial interests, it managed to prevent or modify tariff increases prior to 1861. The probable effect on the United States of a moderate rather than a high tariff policy prior to the Civil War is a question that

[36] For discussion of the land laws see Fred H. Harrington, Merle Curti, Richard H. Shryock, and Thomas C. Cochran, *An American History*, Harper, 1949, Vol. I, pp. 221-223.

has occupied economic thinkers for more than a century without a conclusive answer being produced.

The planters came to fear the social effect of creating an urban Negro working population, and, after a brief period of encouragement to local industry from 1815 on, southern investors put their capital to other use, often outside their own region. There has not been sufficient study of southern investment to tell how much of the planters' savings went abroad.

The South, to some extent, had cultural patterns common in underdeveloped agricultural regions in the twentieth century. There was high concentration of income, a general estimate for 1860 being that three-quarters of the export income was distributed to about 8,000 families. But in spite of concentration of income, luxurious living standards seemed to prevent the planter elite from promoting a high rate of capital growth.

The problem of the internal efficiency of the specialized slave plantation system is too complex to discuss here.[37] But there is at least a possibility that the planter-entrepreneurs, with their semi-feudal cultural values, stood in the way of more rapid capital growth both in their own section and in the nation as a whole.

The southern influence in Washington was hostile to many policies of the entrepreneurs interested in developing the West. Not only did the westward movement draw population away from the old South, but the slave system could not readily be transplanted to many new territories. While it has been noted that eastern businessmen also were doubtful of the value to them of rapid western growth, after the middle 1840's the combination of heavy immigration and increasing western investment opportunities won many of them over to an expansionist policy. Hence, by the 1850's it was chiefly southern influence that blocked federal subsidies for a centrally located transcontinental railroad, freer disposal of western land, river and harbor development, and other internal improvements. Whether more lavish federal aid in the West at an earlier period would in the long run have contributed to capital growth remains a moot point.

A deterrent to capital investment similar to the rivalry of sectional entrepreneurs in national politics was the power of local or special interests in state legislatures. Businessmen and other citizens of the

[37] See Emery Q. Hawk, *Economic History of the South*, Prentice-Hall, 1934, pp. 271-273, and John S. Spratt, "The Cotton Miner," *American Quarterly*, Fall 1952, pp. 214-235.

counties that benefited from the Erie Canal system in New York State, for example, were able up until 1851 to get the legislature to place clauses in railroad charters either prohibiting the carriage of freight or forcing the payment of canal tolls on railroad shipments.[38] The Camden & Amboy Railroad in New Jersey was able through special charter provisions and political influence to prevent for thirty years the chartering of any competing New York–Philadelphia line.[39]

A third type of deterrent to entrepreneurial activity and capital growth was the depression phase of business cycles. Fluctuations in prices, business activity, and employment seem to have been more severe than in the nations of Western Europe. As already illustrated, American entrepreneurs appear to have reached greater heights of incautious optimism during booms than did their European counterparts, and consequently the ensuing debacles were more prostrating. On the one hand, the price inflations that usually accompanied upswings undoubtedly led to diminished consumption by receivers of fixed incomes and larger entrepreneurial profits, both of which stimulated capital investment. But the relatively prolonged stagnation in new investment during the major depressions to some extent offset the capital gains of the boom.

Many leading entrepreneurs and some economic writers were aware of a general cyclical movement and understood the merits of countercyclical investment. But to raise capital by security flotation in a depression was extremely difficult. This is abundantly illustrated in the letters of nineteenth century railroad presidents. Even the minor recession of 1848 led John Murray Forbes to write, "At this moment it is impossible to get subscriptions to any Rail Road however promising." Ten years later he counselled, "We [should] let our Stockholders recover from the depression of the past year and regain confidence before we plunge into anything *however* good." In 1874 John W. Brooks wrote, "The bare idea, even of discussing a new project, would injure one's reputation for sanity." And looking back on these years, Frederick W. Kimball noted that "During the recent depression nobody would even listen to the establishment of a new enterprise."[40]

[38] Frank W. Stevens, *The Beginnings of the New York Central Railroad*, Putnam, 1926, pp. 267-273.

[39] John W. Cadman, Jr., *The Corporation in New Jersey*, Harvard University Press, 1949, pp. 54-59.

[40] Quoted in Cochran, *Railroad Leaders, 1845-1890*, as cited, pp. 105 and 106.

A fourth set of deterrents to entrepreneurial action might be put under the heading of insufficient security. This had many forms. The most routine commercial transactions involved risks when conducted across state lines and at a distance. Prior to the spread of the railroad, inland transportation and transfer agents were unreliable. To be sure of receiving his goods intact and on time, the inland merchant had to travel with them.[41] Before the beginning of credit agencies in the 1830's, it was difficult to know who could be trusted in distant cities, and unfamiliar bank notes might prove to be depreciated or counterfeit. State courts could impede collection of debts by "foreigners," and the status of corporations doing business outside the state of their incorporation was questionable prior to the 1880's. While the United States was nominally one country, the difficulties of doing some kinds of interstate business in the first half of the nineteenth century were almost as great as though the boundary lines were those of independent nations.

Added to these insecurities arising from poor trade facilities and discriminatory local statutes was a lack of the police protection necessary for maintaining orderly markets. Robbery by stealth or violence was frequent, particularly in the newer regions. Only a few cities had organized police protection.

The low business ethics of many American entrepreneurs were a hindrance both to business efficiency and to the raising of capital. Confidence men selling shares or lots were abundant. Bankruptcy with concealed assets was a common recourse for avoiding embarrassing obligations. Capital was frequently squandered in ways that made it hard to draw the line between overoptimism and outright dishonesty. In building the western railroads, for example, construction was often managed and partly financed by local entrepreneurs who were, at the least, somewhat careless in handling easterners' money. Forbes wrote, "My feeling . . . is . . . that Landowners and R. Road contractors are the ones who too often get the whole benefit of the money that capitalists put into the West."[42] But corporate stockholders were also defrauded by eastern operators of apparently high standing. Railroads were gutted by construction companies controlled by the railroad officers. Presidents of corporations printed fake stock certificates and sold them on the exchanges. Contracts were freely broken when it was inconvenient to live up to them.

[41] See Atherton, *The Pioneer Merchant in Mid-America*, as cited.
[42] Quoted in Cochran, *Railroad Leaders, 1845-1890*, as cited, p. 100.

The result of such entrepreneurial practices was unquestionably to discourage investment in the common stock of corporations.

A related deterrent to investment in stock was the lack of regulation of security exchanges and original prospectuses. Let the buyer beware was completely the rule up until the late 1860's. Then after Drew, Fiske, and Gould had swindled Commodore Vanderbilt by wholesale printing of stock certificates, the New York Stock Exchange regulated itself to the extent of demanding information on the total number of shares issued by a company whose stock was traded on the Exchange. But the states and the federal government continued their laissez-faire attitude. The effect was to increase the preference of the conservative investor for mortgages or other forms of local investment where he could keep watch on the entrepreneurs who had his money.

6. *Factors Retarding Capital Formation in the Late Nineteenth and the Twentieth Century*

By the end of the nineteenth century the rate of net capital formation was declining slightly in comparison with the rate of increase in either national income or gross national product, and the latter two series in turn were advancing at a less rapid rate than in earlier decades. The apparent turn of the curve was undoubtedly affected by changing cultural factors that have not been subjected to analysis sufficient to support generalizations. The effect of the West as a promised land and a stimulant to saving and investment was probably lessening. The problems of urban industrial society were emphasizing security and deemphasizing individual initiative, risk-taking, and the "puritan" attitude. The confidence that change meant progress was probably less than in earlier years. A doctrine of consumption was threatening the doctrine of frugality and thrift. But in addition to these and similar deterrents to capital formation, the changing character of entrepreneurship played a part.

A number of important changes in entrepreneurial roles were unfavorable to capital formation: the increase in the size of companies, with an attendant bureaucratization of entrepreneurial functions; the substitution of professional executives for owner-managers; the greater persistence of monopolies and other large organizations regardless of economic efficiency; the inheritance of managerial functions by less able heirs; the supersedure of the influence of general entrepreneurs by that of investment banking houses and other financial institutions; and the deterring effect of taxes and government regulation.

In the large companies that appeared rapidly beginning in the 1880's, the chief executives frequently rose through the ranks. They succeeded by being "good organization men" with a proper regard for loyalties and morale. A study by Mabel Newcomer of the careers of the top executives of the largest nonfinancial corporations for 1899, 1923, and 1948 shows the increasing trend away from independent business backgrounds. Including in her "entrepreneur-capitalist" group (those who have run their own business) "bankers, brokers, and those engineers and lawyers who had a hand in organizing the corporation which they head," she finds that three-fifths of the 1899 group fall in this category, one-third of the 1923 group, and only one-quarter of the 1948 group.[43] The attitude of these professional entrepreneurs toward liquidation or serious risk-taking was likely, to say the least, to be more conservative than that of the owner-manager (owning entrepreneur) or the general entrepreneur.

Not only was the salaried professional disinclined to pursue policies that might eliminate his job, regardless of the profitability of these policies to the stockholders, but he might also be loath to recommend investments that would upset personal relations within the organization. For example, the assets of a steamship company became almost completely liquid during World War II through the sinking of its vessels and resulting insurance payments. There was little prospect that the company's normal trade would be profitable for new vessels in time of peace. The chairman of the board, a large stockholder, and an independent capitalist played with the idea of liquidating the operating end of the business and investing the capital in more promising enterprises. Profit considerations pointed overwhelmingly in that direction. But none of the professional managers in the company, whose jobs would disappear, favored such a plan. In the end the company decided to continue its customary type of operations. The pressures of personal relations and the momentum of a going concern won out over what appeared to promise maximization of profit for the stockholders.

These considerations plus that of size alone, and threatened government prosecution under the antitrust laws, tended to make big-

[43] "The Chief Executive of Large Business Corporations," *Explorations in Entrepreneurial History*, October 1952, pp. 13-14. See also the articles by Winifred Gregory and Irene Neu and by William Miller in *Men in Business*, as cited.

company entrepreneurs think more in terms of maintaining a given market position and stabilizing sales than in terms of continued technological innovation and expansion at the expense of competitors. Furthermore, if one or a limited number of companies controlled production in an industry, it was possible for entrepreneurs to slow down the pace of innovation in the interest of reducing risk and lengthening the period of utilization of existing equipment—a process that might increase immediate purchasing power but slow down capital formation and future production. Well-known illustrations of the slowing down of innovation in the interests of more complete utilization of existing equipment are the American Telephone & Telegraph Co.'s treatment of the hand-set phone after 1907, and General Electric's and Westinghouse's relatively slow response to the possibilities of fluorescent lighting between 1896 and 1938.[44]

If complete figures could be assembled, it might turn out that, other things being equal, the larger a firm the longer its life expectancy. Sampling studies point in this direction. But if the longevity is because of size rather than economic efficiency, the prolongation of the large unit presumably hinders new capital investment and ultimately retards the increase of productivity in the industry. Looked at from the standpoint of the present discussion, this is another example of diminished entrepreneurial efficiency in capital allocation resulting from bigness.

There have been no quantitative studies of the qualitatively recognized shift in entrepreneurship from the founding generation in medium and big business to the sons and heirs of the founders. The period 1880 to 1910 would appear to embrace many such shifts. It seems likely, from isolated case studies, that the second generation tended to be both less able and less interested in expansion than its predecessors.[45]

During the same period the increasing size of security flotations, the better organization of the American money market, and the rise

[44] See N. R. Danielian, *A.T.&T.*, Vanguard, 1939, pp. 102-103, and Arthur A. Bright, Jr., *The Electric-Lamp Industry*, Macmillan, 1949, pp. 384-391. Paul G. Clark in *The Structure of American Economy, 1919-1939* (Wassily Leontief, editor, 2nd ed., Oxford, 1951) pictures the investment policy of AT&T as a kind of automatic adjustment to new demand on a basis worked out by engineers. Entrepreneurial decisions do not appear explicitly.

[45] A number of business histories illustrate this point. Among them see Harold F. Williamson, *Winchester*, Combat Forces Press, 1952; C. W. Moore, *Timing a Century*, Harvard University Press, 1945; Thomas Navin, *The Whitin Machine Works since 1831*, Harvard University Press, 1950; and Cochran, *The Pabst Brewing Company*, as cited.

of strong American investment banks and insurance and trust companies all deprived the general entrepreneur of his control over capital and thereby weakened his authority. The bankers institutionalized general entrepreneurial functions, and the representatives of banking houses took the independent financier's place of authority on boards of directors. The effect seems to have some similarity to that of the replacement of owner-managers by professionals. The investment bankers were interested in stability and "sound" financial practices which would tend to insure the servicing of bonds. They were often unwilling to agree to new investments requiring security issues unless these fitted in with the anticipated movements of the stock market or their general financial plans.

Some new industries, when they reached the point of needing large capital issues, were held back by the conservatism of institutionalized financial entrepreneurship. The automobile and moving picture industries offer illustrations. In automobiles, investment bankers refused to back W. C. Durant's original organization of General Motors. When this company finally secured banker aid in 1910 the conditions were onerous financially and involved effective banker control of the company during the lifetime of the loan. Under this system, for the next five years, General Motors sales increased less rapidly than those of the industry as a whole.[46] In motion pictures Fox and Loew's both encountered Wall Street indifference or hostility. In other words, the bankers represented conservative elements generally opposed to taking new types of risk, even though the latter might promise considerable economic gain if successful.

The deterring effect of tax and regulatory policies on entrepreneurial capital formation has been written about extensively. For instance, the relative failure of the railroads to improve their capital structure and equipment between 1910 and 1918 is blamed by competent scholars on the psychologically discouraging effect of overzealous regulation by the Interstate Commerce Commission. The failure to achieve any net private capital formation during the 1930's has frequently been blamed on the effect of New Deal regulations on entrepreneurial initiative.

The diversion of capital into enterprises lacking comparative advantage by tariffs and subsidies is another example of government "interference." Entrepreneurs would not have invested in new American merchant ships from 1936 on, save for large-scale government subsidy. Insofar as the economy had unemployed resources in this

[46] Ralph Epstein, *The Automobile Industry*, A. W. Shaw, 1928, p. 221.

period, such allocation of capital may have cost nothing, but in principle it produced facilities available more cheaply from foreign nations.

It seems likely that the direct effect of regulation is always adverse to entrepreneurial initiative, but rate-fixing, for example, may have an indirect stimulating effect on technological innovation. An ex-president of a telephone company remarked in conversation that AT&T had to depend on research and resulting improvements in order to make the profits necessary for dividends and expansion under a system of government-controlled rates.

Against this list of possible deterrents to active and intelligent entrepreneurial risk-taking arising from twentieth century conditions should be set some favorable factors: increasing public willingness to invest in stock exchange securities; the accumulation of large pools of small savings by banks and insurance companies; the employment of specialists, such as industrial engineers, economists, and accountants, who, aided by business periodicals and special reports, tended to produce more calculated and presumably more efficient investment policies; the persistence of small business; and direct government aids to, and tax incentives for, investment.

Increasing public familiarity with security investment arose from many sources. Urban middle and upper class income-receivers were getting a larger percentage of the total income as urban population became larger in relation to rural, and as entrepreneurial, managerial, and professional occupations increased. This group was, presumably, more likely to invest in securities than was the farm or small-town population. As business units grew larger, more were publicly financed and the securities of old, well-established companies offered reasonably safe investments. In addition, increasingly active security-selling by banks and brokerage houses from 1897 to 1929 and the government bond-selling campaigns of World War I undoubtedly swelled the ranks of security-holders. Hence, entrepreneurs could undertake large ventures with more assurance of adequate and economical financing.

In this connection it may be noted that as successful companies came to provide more of their working capital from profits or security issues, the demand for short-term, renewable loans began to fall, particularly in the major metropolitan areas. As a result, banker-entrepreneurs in the 1920's were forced to do more of their lending with securities as collateral, and to buy more securities for bank portfolios than in previous decades. This transferred much of the strain of the 1929-1933 decline from other enterprises to the banks themselves. Whereas short-term loans had in general been collectable, the banks were now left holding securities that in some cases declined to a fraction of their former value. However, the problems of banker entrepreneurship in the 1920's and 1930's have been so thoroughly discussed and investigated that nothing can be added here.

The accumulation of vast capital pools from insurance policy premiums and bank deposits went on rapidly from the 1890's, partly as a result of aggressive selling campaigns by insurance and banking entrepreneurs. The life insurance companies granted large areas to central agents, to be exploited on a commission basis. Banks fought for deposits by sending salesmen to call on the more substantial businessmen and by advertising extensively to attract small depositors.[47] Investment trusts also drew the savings of small investors into large pools. After World War II, pension funds became an important form of pooled savings, amounting by 1952 to over $2 billion a year.[48] In addition, corporate savings in the form of reserves against depreciation or depletion represented large blocks of capital available for investment.

Looked at broadly, the increasing emphasis on both personal and corporate financial security was putting the disposition of a large portion of savings into the hands of professional entrepreneurs. Unquestionably, these pooled resources offered an increasingly good market for securities regarded as safe investments. Between 1947 and 1951 about 40 per cent by value of the new security issues were sold privately to other companies. In the case of large corporate issuers and large buyers, investment bankers had no entrepreneurial role in the proceedings. But the bankers could still put small issuers in touch with small insurance companies and collect a "finders fee."

The entrepreneurs of commercial banks and insurance companies also took a direct part in allocating capital for long-run uses through

[47] For insurance see Shepard B. Clough, *A Century of American Life Insurance*, Columbia University Press, 1946, pp. 158-172 and 239-243; Marquis James, *The Metropolitan Life*, Viking, 1947, pp. 340-345; and Owen J. Stalson, *Marketing Life Insurance*, Harvard University Press, 1942, pp. 508-648. There is no adequate history of the entrepreneurial and marketing aspects of banking in the twentieth century. I have made certain studies for a large New York bank, which have some manuscript discussion of the pre-World War I operation of New York banking, but all of this material is treated as confidential.

[48] For more on these new forms of savings and investment see Donald L. Kemmerer, "The Marketing of Securities, 1930-1952," *Journal of Economic History*, Fall 1952, pp. 454-468.

term loans. To improve their languishing business in the middle 1930's, banks started lending funds to selected customers on a periodic amortization basis for as long as ten years. After World War II, bank terms were generally cut to five years, but insurance companies were often prepared to assume such a loan for ten years more. Through amendment of state laws, life insurance companies and trustees were permitted to invest limited amounts in equities. In this way insurance executives in the 1930's became entrepreneurs of housing development. At this same time the taking over of collateral forced banker-entrepreneurs, temporarily at least, into equity ownership.

As with most of the twentieth century changes discussed here, the effect of this minor revolution in financial practices on net capital formation seems ambiguous. A much larger proportion of total savings than ever before was automatically mobilized and put in the hands of entrepreneurs. Or conversely, the private investor had relatively less to say about the formation of capital. But the professional entrepreneurs who control the funds have to view them in general as reserves whose value must be protected rather than as capital that can properly be put into high-risk, high-profit enterprises. On this basis small businessmen claim to be largely prevented from drawing upon these corporate funds, while the local man of large income, with his savings cut by insurance, pensions, and taxes, cannot perform his historical role of risk-taking investor.

The spread of business information firms, expert consultants, and other special services, leading presumably to what Arthur H. Cole has called a more cognitive type of entrepreneurship, went on rapidly around the turn of the century. Companies set up legal departments, authorized shop procedure analyses, introduced cost accounting, and made more use of forecasting.[49] Insofar as these expedients increased the efficiency of production, they added to the value of already-invested capital, and thereby increased total capital. But the battle was far from one-sided. As studies of the relative efficiency of large and medium-sized business have indicated, some of these special services, at least, scarcely compensate for the problems in forecasting and operation introduced by the increasing size of companies.

Over the last 150 years management has been hard pressed to keep pace with the changes introduced by new technology. It does

[49] The Research Center in Entrepreneurial History at Harvard is studying the impact of Taylorism on American business.

not seem a foregone conclusion that the large-company entrepreneur of today, with a high percentage of specialized staff among his employees, is necessarily better able to cope with his particular environment than was the owner-manager of the early nineteenth century selling in local or regional markets. It is possible that the "revolution in transportation" and the rapid growth of a competitive national market outdistanced the devices of management in the mid-nineteenth century and produced a period of relatively poorly informed entrepreneurship for which this later flowering of special services offered a cure.[50]

The rise of large bureaucratic organizations in which decisions were made by professional administrators should not obscure the fact that a great part of the capital allocation in the economy has remained in the hands of small enterprisers. According to both the Commerce Department and Dun & Bradstreet's listings of firms, the number of enterprises has somewhat more than kept pace with United States population increase during the twentieth century.[51] Including the policy-making officials of large companies, therefore, the percentage of Americans engaged in entrepreneurial activity other than agriculture has substantially increased. Many of these smaller firms, to be sure, are not in a position to seek more of the market by reducing prices, although almost any of them may grow by offering better service. Many operate in specialized markets that do not encourage expansion through additional capital investment in that particular business. But in general it may be assumed that in this small-industry, -transportation, and -service area of the economy, many of the entrepreneurial culture patterns of the nineteenth century still persist.

There are also substantial regions of the United States that still are underdeveloped areas. Large parts of the South and Southwest have lacked the managerial and labor skills necessary to establish a broad pattern of industrialization. In West Texas, for example, entrepreneurs interested in investing in new types of industry often find the banks ready to finance only cattle, oil, crops, and a few other old lines of activity.[52] Furthermore, the federal tax law allowing a large deduction for depletion encourages further investment in oil,

[50] For criticism of the general inefficiency of iron and steel entrepreneurs in the 1870's see Andrew Carnegie, *Autobiography*, Doubleday, 1923, pp. 129 ff.

[51] Rudolph Jones, *The Relative Position of Small Business in the American Economy*, Catholic University of America Press, 1952, pp. 34-35.

[52] Based on interviews with selected Texas entrepreneurs, summer 1950.

and the price support program reinforces cultural leanings toward investment in agricultural land.

Therefore, while it may be affirmed that these underdeveloped areas foster a relatively high degree of entrepreneurial energy in capital allocation, this is expressed in specialized and limited ways. Both the Texas and southern California bankers and businessmen interviewed presumed that the general level of assessment of industrial risk and wise allocation of capital were highest in the old centers of the East and Middle West.

For these reasons, and because of the high stage of development of big companies in the older industrial areas, much of the new development of the resources of the Gulf Coast, the Rocky Mountain states, and even the Pacific Coast is being carried on by branches of established national concerns.

While in certain lines of business the entrepreneur may have his range of choice curtailed by bureaucratic or monopolistic arrangements, government has provided him with increasing facilities and safeguards for conducting his operations. Highway and bridge construction in conjunction with the motor vehicle have made major investments possible in new areas and have encouraged entrepreneurs to relocate plants.[53] Improved police and fire protection and more uniform state laws have all encouraged investment in new areas. Only in the twentieth century have some parts of the United States become sufficiently regulated to permit the easy conduct of business. There has been too little historical study of twentieth century business, and of the service group in particular, to estimate the stimulating effect of these factors on entrepreneurship.

Finally, the allocation of capital by entrepreneurs has been profoundly influenced since 1940 by government military policy. Entrepreneurs have been partially relieved of the necessity of deciding what forms new investment should take. The nineteenth century situation of obvious needs in excess of capital resources has been largely recreated. Under these circumstances it is difficult to estimate the role of the entrepreneur in capital formation under conditions of stabilized government demand and fewer shortages in productive resources.

7. *Conclusion*

A survey of the history of American capital formation, which prior to 1940 was directed to a large extent by the imagination of

[53] See K. William Kapp, *The Social Costs of Private Enterprise*, Harvard University Press, 1950.

entrepreneurs, supports the hypothesis that growth depended more on where and how capital was invested than on the absolute quantity of voluntary savings, that well-managed capital increased rapidly from the reinvestment of earnings. In good times entrepreneurs, largely through the mechanisms of banking, drew on credit in excess of savings—in fact, without much regard for the immediate level of domestic saving. Resulting inflations forced involuntary saving on those receiving fixed incomes.

A very large part of the capital goods created by these entrepreneurs had ultimate economic value, even though the original promoters may have failed to produce early profits. Capital invested in transportation paid enormous economic returns through the opening up of natural resources, which included coal in close proximity to iron ore. Similarly, investment in manufacturing brought ultimate profits because of cheap fuel and raw materials and the large home market made available by transportation. But if the resources in agricultural land or minerals had been less, the same quantity of initial capital and the same diligence in operation would not have produced the same end results or given the same incentives to further effort. Entrepreneurial activity is seen, therefore, as related to the utilization of resources, and to an initially low man-land ratio and a rapid increase in population.

The precise influence of the entrepreneur in this capital growth is as difficult to measure as is the influence of any single factor mentioned above. It seems probable that such social complexes cannot be broken down into measurable factors, and must, for the present at least, be treated as Gestalts. The whole process of which entrepreneurial energy was a part changed significantly over time. To men of the nineteenth century brought up in Western European traditions it was obvious that America needed transportation, and that transportation would eventually pay for itself. To say the same thing in general economic terms, there were valuable resources that could be exploited by the existing technology. The cost of railroads or canals over long distances was very high; for sixty years after 1830 there was this major industrial use for capital. Large additional sums were necessary to bring high-grade mines into effective production. With abundant materials, simple machines promised good returns from mass production. In this complex, rewards for individual success were high. All that was needed for rapid growth was for entrepreneurial imagination to proceed in the routine patterns of the culture.

The ending of what may very tentatively be called the early or pioneer stage of industrial economy and the rise of large corporate business units changed the character of the complex leading to growth. Judging by Kuznets' figures on the declining rate of net capital formation and by the increasing percentage of non-agricultural businessmen in the population, the change appears, up to 1940 at least, to have retarded activities leading to capital formation by entrepreneurs. The superseding of independent financiers (general entrepreneurs) by investment bankers, the rise of professional, salaried managers, the growing complexity of the industrial economy, and the increase of government taxation and controls all appear to have worked against imaginative risk-taking.

Some leading scholars of the subject have been led to the belief that private entrepreneurship is destroying itself by its own creations of bigness and planning.[54] Whether or not this view is correct, there seems no doubt that the entrepreneur of the mid-twentieth century operates in a different cultural setting and responds to different motivations than did his predecessor of 1850. Meanwhile, the large-scale entrance of the federal government as a user of capital equipment tends to obscure the underlying economic trends in entrepreneurial risk-taking or capital allocation and use. Under these circumstances, with the entrepreneur hemmed in by bureaucracy, complexity, and political action, it is hard to forecast his role in capital formation.

COMMENT

Alexander Gerschenkron, Harvard University

I agree with much of what Hoselitz has said in his very interesting paper. It is primarily my need to conform to "role expectation" as a discussant that has caused me to put down on paper a few comments on points where some disagreement exists.

Hoselitz has attempted to place the treatment of entrepreneurship and capital formation in France and England against the background of the respective rates of economic development in the two countries. Although this is a fruitful approach, some critical remarks may be in order.

Hoselitz says that in the sixteenth century the two countries were

[54] See Joseph A. Schumpeter, *Capitalism, Socialism and Democracy*, Harper, 1942, and Fritz Redlich, "The Business Leader as a 'Daimonic' Figure, II," *American Journal of Economics and Sociology*, April 1953, pp. 289-299.

approximately equal with regard to productivity and technology, with France probably having a slight edge. We cannot be absolutely sure, but this seems a very plausible statement. Presumably, the rate of growth was faster in England during the sixteenth century, partly because of internal disturbances in France (as is generally recognized) and partly because of the greater backwardness of England at the beginning of the century (a fact less generally admitted). In this respect the penetration of German technological progress into English metallurgy and mining was of central relevance.

Furthermore, Hoselitz introduces a table which indicates that the rates of economic growth during the first half of the nineteenth century were much higher in England than in France. Even if expressing national income in constant 1913 prices raises frightening index number problems, it is perhaps plausible to assume that the main point the comparison is designed to convey is well taken. But why is Hoselitz concerned with the sixteenth century at all? This is not entirely clear to me. Is it because he asserts that the rate of growth in France has been lower than in England ever since the near equality in productivity levels in the sixteenth century? There is at least such a hint in the paper. But if we are allowed to play a little with the figures in his table, the result would seem to corroborate this writer's previously formed impressions, namely, that per capita income in England in 1800 may have been about 10 per cent higher than in France, but not much higher.

Hoselitz speaks at length of the terrible effects on France of the financial crisis of 1559; he places much emphasis on the devastating effect of the religious wars that followed that crisis; he cites in the same connection the dire effects of the price revolution and, in fine, of the expulsion of the Huguenots. I find it difficult to agree that the effects of the price revolution upon French economic development were as unmitigatedly unfavorable as Hoselitz makes them out to be. But this is beside the point. The point rather is that if there had been such "terrible economic devastation" in France as is described by Hoselitz (page 298), the closeness of the per capita levels of output in the two countries at the end of the eighteenth century is rather surprising. Moreover, if despite all the disabilities France succeeded in maintaining or nearly maintaining her position vis-à-vis England, the French economy must have done very well in the intervening period. And the proper question to ask should refer to the reasons for such an astonishing performance.

Hoselitz does not ask the question explicitly, but it seems that his reference to the industrialization policies of the mercantilistically oriented governments in France is designed to provide an answer to the tacit question, and the same answer is intended to serve as an explanation for the discrepancies in the rates of growth as between the two countries in the first half of the nineteenth century. In other words, the industrialization policies of the French government succeeded in keeping up the rate of growth till the end of the eighteenth century, but at the same time they prevented the emergence of a self-reliant entrepreneurial group interested in risk-taking and ready to commit itself to the policy of long-term investment in fixed capital.

This, of course, is a possible answer if one is willing to accept the particular sociology and reading of history implicit in it. The government performs wonders for industry by providing entrepreneurs with multifarious grants, interest-free loans, tax reductions, etc. But the result is the *rentier* psychology of the French entrepreneur. "This central role of the government doubtless enhanced the feeling of dependence on government service and government subsidies for new enterprises and contributed to the well-known aspiration to attain a *rentier* status, which was and still is so typical of the French middle class" (page 304). Is this not too sweeping? Not that it is necessarily incorrect. But I should want some more specific evidence as to the plausibility of that sequence.

Surely, the Russian state of the 1890's did a great deal to encourage entrepreneurial activities, and by devices that were not dissimilar from those used by the French government. But if one considers the very great changes that took place within the entrepreneurial classes between, say, 1885 and 1910, it is very difficult to argue that state aid had resulted in the destruction of entrepreneurial initiative. In fact, everything we know points in the opposite direction. It can be argued, of course, that the Russian state of 1885-1900 did not exercise any regimentation of production comparable to that of Colbertian or post-Colbertian France. This is true. But I still feel that Hoselitz's history, like his sociology, may be a little too sweeping. He says: "Although a certain amount of private initiative was evident, the role of the government always remained paramount, and even continued in influence after 1789, especially under Napoleon" (page 304). Surely, this is a patently inadequate description of France in the second half of the eighteenth century, when there was a great decline in the degree of economic regimentation and the economy seemed to grow at a fast clip.

Hoselitz is quite right in referring to Napoleon. But Napoleon was in many respects a return rather than a link in an unbroken chain. It is perfectly true, I think, that the policies during the Continental blockade created complex problems which the weak Restoration governments could not readily solve, and the commercial policies of the Bourbons were to some extent dictated by the legacy of the industrial hothouse inherited from the Napoleonic period. Still, much more important than that legacy were the political necessities of the Bourbons, that is, their need to find support within specific narrow groups. This need resulted in the toleration of the solidarity bloc and the imposition of a tariff policy which isolated France economically and accounted more than anything else for the relative economic stagnation in France in the first half of the nineteenth century. I believe at any rate that it is possible to explain that stagnation without much recourse to such deficiencies in entrepreneurial vigor as may have existed in France. But was France really lacking in entrepreneurial vigor?

How was the period of stagnation broken? By the appearance of a group of great entrepreneurs, many of them belonging to the Saint-Simonian group, as is so well described in Hoselitz's paper. But what caused the sudden appearance of those men? Hoselitz is not quite sure. He speaks of "a strange accident, or perhaps . . . the logic of historical necessity." I do not quite know what the latter means and I should have preferred to be led across Buridan's bridge more gently and more slowly. But I can see that it is difficult for Hoselitz to perceive in that event more than a strange accident. After having shown how government policies in France ruined the French entrepreneur and after having explained the low rate of growth before 1850 in terms of lack of entrepreneurial spirit, he was indeed entitled to expect that the last sparks of entrepreneurial strength had been successfully extinguished between 1815 and 1850. That the actual outcome was very different is certainly strange but only in the light of the somewhat unguarded generalizations that have been made earlier.

I feel it is much more natural to explain the change by reference to the liberalizing influence of Napoleonic policies, which broke up the solidarity bloc and created a climate within which entrepreneurial activity could successfully unfold and be applied to the great innovations of the period. Seen in this light, the appearance of the Saint-Simonian group is neither a strange accident nor the result of some iron law of historical development, but a rather natural consequence of the very nature of entrepreneurship. I doubt very much that a group which by definition constitutes an elite group, a group of uprooted men who have forsworn tradition and allegiance to the dominant value system of the community (Schumpeter), can be said to be lastingly influenced by extraneous unfavorable conditions. The Saint-Simonian episode shows that with particular clarity. It reveals the suddenness with which entrepreneurs appear and are ready for constructive action once a favorable conjuncture of circumstances has developed. Let me add that the history of Russian entrepreneurship after the emancipation of the peasantry seems to point to the same conclusions. There is, of course, no doubt that the entrepreneur provides a powerful dynamic force in economic development. But in attempts to construct models of economic development which deal with sudden initial spurts of economic growth, it is not at all paradoxical to say that just because the entrepreneurs are an active individualistic group composed of independent men, in a certain sense, they are likely to play the role of the dependent rather than the independent variable. (This, of course, does not mean that for other purposes and in other contexts it is not most profitable and illuminating to focus attention upon changes in entrepreneurial attitudes and behavior. Quite the contrary is true. It is, for instance, perfectly clear that changes with regard to standards of honesty and time horizons may be of the greatest possible importance for the understanding of the changing nature of economic development.)

Similarly, the role played by the banks in the industrial development of France is explicable much less by the scarcity of entrepreneurial talent than by the scarcity of capital under specific conditions of backwardness; that is to say, in conditions where capital-intensity of output has increased as compared with what it had been in an advanced country. It does make some difference whether the industrialization spurt occurs during the "textile age" or the "railroad age." In addition, in a backward country the very breadth of the industrialization effort calls for a much larger supply of capital than was the case with the more gradual development in the advanced country. I agree with the author that the banks in fact did perform entrepreneurial functions. But in general, with regard to the banks as in so many other respects, there is much similarity between the economic history of France and that of Germany. It is not obvious at all that there were significant basic differences with regard to the entrepreneurial element in the two economies. In particular, one might think of Hoselitz's statement that the French entrepreneur came to seek earlier and more assiduously than the British or the American entrepreneur the relatively safe shelter of monopoly (page 304). Surely, German entrepreneurs were at least as eager to enter into monopolistic compacts as their *confrères* in the West. And yet the fact remains that the Germany economy had been able to sustain a high rate of industrial growth while the magnificent initial effort in France, though not leading to stagnation at all, failed to produce an equal rate. In any attempt to explain the slow rate of growth in France comparisons with Germany present themselves almost inescapably. Once such comparisons are admitted, it is not too difficult to draw up a list of accelerating factors that existed in Germany but could not be found in France to any comparable extent, or, obversely, a list of retarding factors in France that did not exist in Germany. I doubt very much that differences in entrepreneurial behavior would deserve a high rank on such a list, and I doubt even more that such differences in entrepreneurial behavior as can be found are not fairly explicable as the result of other differences, more fundamental and much less volatile, between the two economies.

Just because I believe that the entrepreneurial approach to economic history has opened up new and profitable areas of research I am fearful of attempts to overstress the role of the entrepreneurial factor. It would be unfortunate if grave doubts were to be cast upon the validity of the approach because it has proved unable to support a weight of emphasis for which it was never designed.

Perhaps one final remark is in order. While the foregoing remarks suggest the existence of some disagreement between Hoselitz and myself, its extent should not be exaggerated. I feel that essentially it is a question of a different distribution of emphasis. I fully appreciate the fact that Hoselitz has written his paper within a framework given by an assigned topic which in itself has forced him to stress certain aspects of the development at the expense of others.

E. P. Reubens, The City College of New York

In his explanation of the differential growth of the British and French economies, Hoselitz lays great stress on the different degrees of economic intervention by the state in those two countries. He presents France as a case of nearly arrested development involving a paternalistic government and a persistently adolescent business class; while laissez-faire Britain is a picture of energetic, self-reliant entrepreneurs turning the economic wheels faster and faster.

The conclusions drawn from these facts seem rather dubious. There is much evidence that the contribution of the state to economic growth may frequently be positive and even essential, and that in any particular case the actual results depend very largely upon the form and direction of state action.

Japan is an example of state promotion of economic growth, along lines which appear to have been indispensable under then-existing conditions and which certainly were crowned with substantial success. The government pioneered industrial innovations, subsidized some private ventures in the earliest stages of a new industry (but only in high-cost industries of strategic importance were subsidies substantial and persistent), placed armament orders, provided social-overhead capital, curtailed consumption by taxation, promoted private saving and channeled that saving into industrial investment, secured capital from abroad at a time when both direct investments and private loans were virtually unobtainable, promoted and supervised industrial combinations, explored foreign markets, and so forth. Not only did this paternalism succeed, but the system actually was increasingly "privatized" as time went on (except in a few fields, such as railways and steel). The kind of action the Japanese government did *not* take was the primarily "protective" type: sustained high tariffs, long-run domestic monopolies, extensive subsidization. This is to say that the Japanese government avoided most of the devices whose main effect is to protect inefficiency or to raise prices without justification.

A somewhat similar record is revealed in the rise of modern Germany. Even in the New World we must recognize the important role of governments—especially state and local authorities—in providing social-overhead capital.

To explain Britain's rapid progress during the nineteenth century without much government participation in economic activities—i.e. at home, ignoring the vast colonial activities—more emphasis might be placed on her head start, backed up by her favorable situation in the circumstances of that era and stimulated by the profit inflations flowing from wars and monetary expansion. The growth of France, in contrast, seems to have been held back in considerable degree by the difficulties of following closely behind the leader without an equally favorable geographical and cultural environment, and also by a concern for preserving a broad agricultural sector in the economy as well as an excessive reliance upon various forms of protection for the new industrial sector.

Indeed, I would directly question Hoselitz's assumption that the existence of an active government tends to produce passivity among businessmen. In France it may have done so; but the causation may have run partly the other way: in the absence of an aggressive entrepreneurial class the French government more and more had to take over the functions of that class.

Under different circumstances the role of government may be equally vital without moving in the same direction. Both Germany and Japan indicate how an active, fostering governmental role is conducive to rapid growth and a gradually widening sphere for private business. Underdeveloped economies today, which appear to need the fostering role of the state to a greater degree than was usually the case in the past, face a choice not between state action or none, but rather between the constructive and obstructive lines of state action, in various degrees of collaboration with private enterprise.

HAROLD F. WILLIAMSON, Northwestern University

In setting out to answer the questions of how economic expansion was financed in an underdeveloped United States and who were the active agents in industrialization, Cochran has made a significant contribution to the field of economic history. The part played by American entrepreneurs in capital formation and economic growth has been discussed piecemeal in a wide variety of publications, but this represents a pioneer attempt to treat American economic development around this central theme.

As a generalization the author suggests that "The role of the entrepreneur . . . is shaped by a combination of factors involving personality types, cultural attitudes, technological knowledge, and available physical resources" (page 340). The interrelations of these four factors form the basis for his study of the role of American entrepreneurs in capital development.

There is no question that at the beginning of the colonial period the North American continent between the 25th and 49th parallels offered abundant opportunities for economic development. As a "backward area" vis-à-vis Western Europe the colonies had access to the accumulated technical knowledge of an advanced economy. While these characteristics were not to be found generally in other parts of the world, they were not unique and in themselves do not account for the remarkable economic expansion which followed. It was their combination with particular personality types and cultural attitudes that gave the American economy its distinguishing features.

In many respects the most interesting and significant part of the paper reveals how personality types and cultural attitudes favorable to active entrepreneurial participation in the economy emerged early in the colonial period. A background and training in Europe had prepared even the first colonizing adventurers to look for effective ways of exploiting the resources of the New World. A selective process which determined the types of individuals who migrated brought a high percentage of actual or potential entrepreneurs to the American colonies. Positions with the church, the government, or the military which carried high prestige in the mother country were largely absent from the colonial setting. The result was the development of a cultural environment that not only accepted but put a premium on "wealth-getting" as a means of acquiring social status. In such an environment the entrepreneur, in contrast with his position in many societies, was not considered a deviant personality. In other words, there was "built into" the American society a set of institutions or cultural values that accepted change as normal and rewarded the individuals who brought it about.

Given these conditions, the stage was set for the remarkable economic growth that followed. Cochran illustrates in some detail how extraordinarily ingenious successive generations of American businessmen were in expanding the supplies of capital funds by adapting old institutions or evolving new types. He calls attention in passing to several questions, as yet unanswered, regarding certain elements of the American scene that may have retarded capital accumulation. The concluding section deals with a number of recent changes in the environment that may have weakened the position of the entrepreneur in the economy.

The only serious omission in this otherwise excellent description and analysis of the motives for and methods employed in expanding capital funds has to do with the reinvestment of earnings by American business. It is true that the growth of railroads and public utilities in the nineteenth century required investment funds beyond the amounts that could be generated within individual concerns, and that the growth of corporations in these fields began to change the role of the entrepreneurs by the introduction of professional managers and large groups of stockholders who had little, if any, influence on management policies. It would be a mistake, however, to become too preoccupied with this segment of the economy. In the fields of manufacturing, distribution, and marketing (not to mention agriculture) the family-owned or closely held company was predominant throughout the greater part of our history. The nature and circumstance that prompted the great majority of these organizations to meet their capital requirements out of earnings should receive careful attention, not only for historical reasons but also because much the same psychology seems to influence investment decisions in these fields even when stock ownership is widely distributed and professional management is introduced.

As a matter of practical necessity Cochran confined his attention largely to an analysis of the forces that affected the supply of capital. In terms of economic growth, however, the question of the efficient allocation of capital funds is of considerable significance. By raising the questions regarding the effect on the supply of capital of maladjustments between the demand for and supply of labor, sectional and local rivalries, and the lack of security associated with certain types of investments and particular regions, the author gives evidence of imperfections in the organization of the capital markets. But this topic should be developed further. More needs to be known about the extent to which mobility of capital was affected by ignorance and by barriers that were deliberately introduced. For example, was the secrecy that surrounded business operations down to recent times a factor that led to a large amount of reinvestment in firms when capital might have been more productive elsewhere? How much were banks influenced in their lending operations by tradition which made it difficult for different types of business to secure accommodation? Answers to these and similar inquiries would give a better understanding of how effectively capital funds were allocated historically in the American economy.

These comments do not detract from the fact that insofar as the economic historian fulfills his function as "handmaiden" to the economic theorist by presenting a careful and accurate account of the evolution of a particular set of institutions, Cochran has discharged his obligations in a highly competent fashion. But if the purpose of this conference is to contribute to theoretical generalizations about capital formation, it is pertinent to ask what conclusions may be drawn at this level from his paper. Why, for example, was he assigned a topic which carries the implication, in its title at least, that the entrepreneur was important in American capital formation?

Perhaps the key to any broad conclusion that may be drawn from the paper lies in the generalization advanced regarding the factors that combine to affect the role of the entrepreneur. It may be assumed from the examination of the American experience that there are four "necessary" (but not sufficient, each by itself) conditions if entrepreneurs are to play an active role in capital formation and economic growth. These are the "right kind" of personality types, the right kind of cultural attitudes, technological knowledge, and access to physical resources, all of which were coexistent in the American scene from early in the colonial period.

The very juxtaposition of these factors makes it difficult, however, to evaluate the role of the entrepreneur in American development. To the extent that the social environment imposed few obstacles to change, his role was much less significant than if resistance had been strong. In fact, given this kind of an environment, it would not be important to study the entrepreneur except as an agent in the mechanism that resulted in change. The opposite point of view would assume that the entrepreneur was a positive force, constantly struggling to introduce new production functions and attempting to modify institutions in the face of inertia or active opposition. He would thus assume the key role in bringing about economic development.

To pose the problem in this fashion comes dangerously close to asking whether the social environment creates the entrepreneurs or the entrepreneurs create the social environment. The purpose is not to push the argument to such extremes. It is rather to call attention to the importance of determining the relative independence and dependence of each of these two factors in economic growth. A satisfactory answer would go a long way toward establishing a basis for an acceptable theory of capital formation and economic development.

LELAND H. JENKS, Wellesley College

It is significant, I think, that both Hoselitz's and Cochran's papers have a good deal more to say about entrepreneurs and their social milieus than about capital formation. There is a good deal in Cochran's about factors affecting capital *allocation*, but that is not necessarily the same thing as capital formation. This emphasis may be inherent in the entrepreneurial approach to long-run economic changes. As I see it, the greatest common factor unifying such an inquiry is the assumption that a general theory of society—specifically, some sort of sociology of change—is necessary to account for economic development. The economic data alone do not enable us to understand how people can respond differently to identical stimuli. Accordingly, "entrepreneurship" symbolizes a good deal more than the actions of one or more businessmen. It symbolizes an undetermined range of considerations—largely outside the purview of static models—which also impinge on the decisions of businessmen, including their decisions to be businessmen.

Cochran explicitly assumes a Schumpeterian entrepreneur who introduces innovations in the production function, which involve (in Schumpeter's words) "a non-negligible outlay of capital." The essential function of entrepreneurship, then, is capital allocation along lines involving novelty (hence also "uncertainty"?). But I think that Cochran should make clear that this sort of operation does not *determine* unambiguously either the direction or the amount of economic change for a given society. It should be pointed out frankly to a group interested in measurement that in terms of an entrepreneurial approach there is nothing remotely resembling equivalence between inputs and outputs. For the economy as a whole, for instance, innovation may emerge as capital-saving. Thus our explanatory schemes must not be thought of, even surreptitiously, as introducing a principle of conservation of effort; neither should they be criticized or apologized for as falling short of such a standard in their demonstrations.

Doubtless I was supposed to make reference to capital migration. In Cochran's paper British capital figures as a means employed by financial entrepreneurs in the United States to enable them to carry forward new enterprises. At least in this context a restricted meaning for capital is used—something like monetary capital or purchasing power.

I am not so sure of Hoselitz's position. As a matter of fact, he virtually ignores these same railroad bonds and their counterparts in fifty other countries in speaking of *British* growth. Hoselitz defines economic growth in terms of national income and seeks in entrepreneurship an explanation of the fact that Great Britain has outrun France. Now we know that in the generation before World War I—to go no further—a substantial part of British investment income was derived from such things as American railroad bonds, rubber plantations in Malaya, and so on. (There had been prior capital allocation to these countries, by financial, commercial, or industrial entrepreneurs, or all three, almost always resident in Great Britain.) There was simply nothing comparable in the case of France. The dimensions of this overseas activity were such that it cannot be regarded as irrelevant to any measure of British economic growth, but especially not to national income.

We might ask, Without her overseas economic empire would Britain have run ahead of France? So stated, an answer would have to be speculative. What we can be sure of is that only analytically, not historically, can British economic growth in the nineteenth century be limited to the British Isles. Even if we were to include what has been passed over (for of course Hoselitz is not ignorant of these matters), we could still look for differences between France and Great Britain in entrepreneurship. But the factors which Hoselitz stresses so heavily to account for French backwardness—government patronage and powerful financial sponsorship—are elements which have also been conspicuous in British enterprise overseas. It is curious that Hoselitz notes capital migration when he is talking about France and the British who helped start things there, but omits it in discussing British economic growth.

One could move on from here to comment on a strain of nostalgia in both papers, and their marked ambivalence as to the consequences of bigness. But this is enough to suggest that we are still a long way in this entrepreneurial approach from being sure that some of our statements will not be as true if we turn them upside down.

I must say that I concur wholly with Cochran's suggestion that we think of entrepreneurship as part of a process which itself undergoes change in time, and with his further suggestion that "growth depended more on where and how capital was invested than on the absolute quantity of voluntary savings . . ." (page 372).

Reply by Bert F. Hoselitz

I wish to express my appreciation for the very penetrating critical comments by Gerschenkron, Reubens, and Jenks. In part they place emphasis on points insufficiently underlined or entirely omitted in my paper, and in part they direct attention to portions of the argument which need to be sharpened or further elaborated. Above all, I must thank Gerschenkron for having supplied a number of facts which were badly neglected in my paper. I want to support fully his emphasis on the noticeable decline in economic regimentation during the last few decades of the *ancien régime*; on the fact that Napoleon's policies, and even those of the Directoire, represent a return to much earlier practice; on the constraints imposed on the Restoration government due to its political weakness; and on the strong impetus given to French economic development through the liberalizing tendencies of the government of Napoleon III.

The most rapid advances in French industrial history were probably made in the last halves of the eighteenth and nineteenth centuries, periods in which liberal tendencies were relatively strongest in France. But even in these periods French growth rates do not seem to have reached those of Britain in its best decades. Although "the scarcity of capital under specific conditions of backwardness" (another factor stressed by Gerschenkron) can be made accountable for this failure, France did engage in large-scale financing of foreign governments and enterprises at a time when—measured by British standards—considerable expansion of the domestic capital plant would have been possible. Even if great weight can be attributed to the factors mentioned by Gerschenkron, there is need to explain why repeated relapses into relative stagnation occurred in France and why a sustained period of growth commensurate with that in Britain, Germany, or the United States is absent.[1]

[1] There is only one factual point raised by Gerschenkron with which I cannot agree, and that is the difference in per capita incomes in England and France at the end of the eighteenth century. I believe England's superiority to have been substantially greater than 10 per cent. In support of this view I cite three pieces of evidence: (1) Colin Clark (*The Conditions of Economic Progress*, 2nd ed., London, Macmillan, 1951, pp. 71 and 80) computed British and French annual incomes per head of working population and expressed them in International Units. For the first decade of the nineteenth century he obtains an annual income per worker of 566 to 584 I.U. in Britain and of 248 I.U. in France. (2) Arthur Young, who was an acute and experienced observer, declared that in France "those who lived on agricultural labor, and they were the greatest number, were 76 per cent as well off as in England" (cited in Eugène Gaudemet, *L'abbé Galiani et la question du commerce des blés à la fin du règne de Louis XV*, Paris, Arthur Rousseau, 1899, p. 75). (3) If we convert Henry Beeke's estimate (*Observations on the Product of the Income Tax*, etc., London, J. Wright, 1800, pp. 126 and 136) of approximately £170 million into francs, we obtain (at the rate of 21 francs per pound) an English national income in 1798/1799 equal to approximately 3,570 million francs, whereas, in 1800, French national income was estimated at 5,402 million francs (cited in *Income and Wealth, Series III*, Milton Gilbert, editor, Cambridge, Eng., Bowes & Bowes for International Association for Research in Income and Wealth, 1953, p. 53). With a population in England of approximately 9.5 million and a population in France of about 27 million, these figures yield an average income of 375 francs in England and of 200 francs in France.

In addition to rectifying the factual historical record, Gerschenkron also touches upon a fundamental sociological problem, the place of the factor of entrepreneurship in a historical explanation of economic processes. It is extremely tempting to engage in a full-scale examination of this question, but its magnitude would require a full-length paper, at least. Nevertheless, because of its central importance, and because some of Jenks' and Reubens' remarks deal with this problem, I shall explain the sociological assumptions on which my paper is based. Gerschenkron expresses the view that entrepreneurs are likely to play the role of the dependent rather than the independent variable in attempts to construct models of economic development (page 376). I fully agree with this viewpoint, and I believe that close reading of my paper will reveal that it was written with this conception in mind. At the end of the introductory section I point to the influence exerted by legal and political institutions on entrepreneurial activity. In discussing the development of entrepreneurship in Britain, I stress the nature of the internal political balance in seventeenth century England, the fact that certain important developments affecting capital mobilization and technical guidance of new enterprises became possible because these enterprises developed on the periphery. Again, I show how the openness of the social structure in Britain was a determining factor in entrepreneurship and how later, through the influence of rich returns from overseas investment and the accumulation of large amounts of capital, the original vigor of British entrepreneurs appears to have subsided.

If I understand my critics correctly, the problems at issue are essentially two: (1) Granted that entrepreneurship is a dependent variable, what is the precise nature of its relation to other variables that exert an influence on the pace of development? and (2) What influence do various forms of government control and guidance of industry exert on the number, independence, and self-assertiveness of entrepreneurs?

I shall take up the second point first. Although some views on this, as well as on the first question, are implicit in my paper, I did not intend to provide a full answer for either. Above all, I did not intend to compare the relative efficacy of government action and action by private individuals in achieving a high level of economic development. What I did mean to show was how certain forms of government regulation tend to retard rather than further economic growth in an institutional environment in which primary reliance for the guidance of investment is placed on private entrepreneurs. The examples of Russian, Japanese, and German experience, therefore, do not disprove my contention but point to the need of distinguishing between types of government intervention which impede the development of private enterprise, which do not impede it, and which are neutral. Let us consider, for example, the case of Imperial Germany, which is cited by Gerschenkron and Reubens as an example in contradiction of my general viewpoint.

Our appraisal of the influence which the German government exerted on German industry may be somewhat colored by our interpretation of the over-all character of its politics. There is no doubt that of all modern capitalist governments the German, and before it the Prussian, were the most authoritarian and the most paternalistic in relation to the individual citizen. On the surface this would lead one to assume that the German government also exerted the strongest regulatory influence on industry. But I believe that this was by no means the case. There is no necessary connection between absolutism in the exercise of political power and full-scale government control of economic affairs. The governments of Prussia and pre-1914 Germany were, on the whole, rather liberal in economic affairs and, so far as I can see, interfered little to prevent the full development and aggressive assertion of private entrepreneurship. The German government tried, of course, to carry out an economic policy. Bismarck even passed labor and social insurance laws which were regarded as anathema by the more doctrinaire liberals of the time. But there is a vast difference between a set of economic policies which merely determine the external framework within which private entrepreneurial action is possible and the more direct intervention in industrialization processes which was characteristic of pre-revolutionary France. Unlike the latter, the German government supplied rules for the game but did not take the cards away from the players in order to deal its own hand.

There are still other factors in the socio-economic picture of pre-1914 Germany which exerted an influence on entrepreneurial action, chief among them the somewhat ambiguous social position of businessmen between a landholding but largely impoverished aristocracy and a professional lower-middle class with status aspirations far beyond its economic importance. It would lead us too far astray to discuss these factors in detail. But the fact that their presence in Germany cannot be disputed makes me wonder whether analogous variables may not be discernible in Russia and Japan.[2]

The problem of the precise nature of the relation between the variable "entrepreneurship" and other variables which exert an influence on the pace and direction of economic growth seems to be central to Gerschenkron's remarks. He thinks that I overstressed the role of the entrepreneurial factor and underemphasized other factors. In particular he cites the example of pre-1914 Germany and the emergence of the Saint-Simonian entrepreneurs around the middle of the nineteenth century in France.

Gerschenkron and I are agreed that this emergence constitutes a break with the past. The main issue is the explanation of the sudden appearance of these men. Gerschenkron finds my explanation inadequate. His criticism, however, attributes a view to me which I do not hold. He says that I was "entitled to expect that the last sparks of entrepreneurial strength had been successfully extinguished between 1815 and 1850" (page 376), and that, on the basis of this assumption, the emergence of the Saint-Simonians was indeed a "strange accident." Apparently, I expressed myself so clumsily that even as acute and well-informed a reader as Gerschenkron could be misled. I did not say, nor did I imply, that entrepreneurship was killed under Napoleon I and his Bourbon successors. In particular, I believe that it could be shown that in the field of financial talent there was an unbroken line from Jacques Coeur and the moneymen of the Lyons exchange in the sixteenth century, via the more eminent tax-farmers and men like Law and Necker, to the bankers of the "old school," and finally to the brothers Pereire. And I referred to "historical necessity" because I felt that the new impetus in the 1850's came from the money side rather than from industry, and that this was quite in the line of French entrepreneurial traditions and in profound contrast to those of Britain.

But in order to supply a fuller explanation of the problem, of which the Saint-Simonian episode is merely an example, and in order to purge myself of Gerschenkron's complaint that the sociological theory underlying my exposition is too simple, I wish to add a few remarks on two socio-psychological generalizations, which should,

[2] This fact also makes me suspect that the "privatization" of the Japanese economy did not proceed so smoothly or, indeed, so far as Reubens claims. I base this opinion too on a recently published paper by Marion J. Levy, Jr., "Contrasting Factors in the Modernization of China and Japan," *Economic Development and Cultural Change*, October 1953, pp. 161-197.

perhaps, have been stated explicitly in my paper in order to avoid misunderstandings. I will state them rather categorically since a full discussion of these complex relations would lead far beyond the space at my disposal. Some further elucidation of these thoughts may be found in my paper on "Entrepreneurship and Economic Growth."[3]

The first proposition is that it is probably incorrect to speak of entrepreneurship as a homogeneous phenomenon. One must distinguish different forms of entrepreneurship depending upon the general institutional environment—notably, the degree of governmental guidance of and interference in the economy—and upon the nature of the business in which entrepreneurs are engaged. I believe that an important difference exists between industrial entrepreneurs, on the one hand, and financial and commercial entrepreneurs, on the other. The differences between the groups of entrepreneurs is due mainly to three factors, two of which have general applicability and the third of which has special relevance for Western European countries. The first is that, *ceteris paribus*, investment in industry is riskier than investment in finance or trade, since the invested capital turns over more slowly and is more specifically tied to supplying a particular market. Second, the industrial entrepreneur, at least in the early stages of industrialization, must possess not only talent for business but often also technological knowledge and skills and a greater genius for leading men in a joint task than a merchant or financier. And finally, in the countries of Western Europe entrepreneurship in trade and finance has much deeper roots and longer-lasting traditions than that in industry. This means that the social position of financiers and merchants is less ambiguous than that of industrialists, that time-honored codes exist for the one group which are absent for the other, and that entrepreneurs in finance and commerce can build upon acquired privileges which only slowly were extended to, and sometimes even had to be fought for by, industrialists.

On the basis of these reflections I think that Britain, in which independent industrial entrepreneurship developed earlier and throughout played a more forceful role, shows a more profound social-structural change away from medieval antecedents than France. In part this was probably due to the greater weakness of entrepreneurial institutions in medieval Britain than in France. But whatever the reasons, the victory of modern capitalism was more

[3] *American Journal of Economics and Sociology*, October 1952, pp. 97-110.

complete in Britain than in France, which continued until late in the nineteenth century to show features in its economic ideology which are reminiscent of a precapitalist system of values. An important aspect of this difference appears to me to be the more aggressive entrepreneurial spirit in Britain and with it the more successful exploitation of economic possibilities as they became available with the progress of science and technology.

In this paper, as well as at various places in my original essay, I have made reference to traditions in entrepreneurial behavior and norms. My second general proposition relates to this problem: Among the variables affecting entrepreneurial activity, past entrepreneurial performance and traditions of entrepreneurship occupy an important place. Though the proposition may sound tautological in this formulation, its full implication becomes clear if we consider its corollary: Since rigorous norms of entrepreneurial action often develop in a country with long traditions of entrepreneurship, any reorientation of entrepreneurial behavior must overcome not merely external obstacles (e.g. scarcity of capital, absence of a regular, disciplined industrial labor force, etc.) but also those intrinsic obstacles which may be imposed by the existing traditions among enterprisers. In order for new forms of entrepreneurial attitudes to develop, an overwhelming challenge must exist which the old forms are unable to meet. Industrial entrepreneurship, as distinct from entrepreneurship in trade and finance, demanded such new attitudes, and hence only rarely attained full-scale development. In fact, outside the Anglo-Saxon countries and possibly those regions of the Continent which came under the lasting influence of Calvinism or other dissenting Protestant sects, vigorous, independent industrial entrepreneurship hardly developed.

The relationship between Protestantism and the development of the "spirit of capitalism" was, of course, first explained by Max Weber. As is well known, a long controversy ensued in which some of Weber's opponents repeatedly emphasized the capitalist spirit and behavior of medieval merchants, notably in the cities of northern Italy. I believe that some of the disputes over points in Weber's thesis result from his failure to draw a sharp distinction between mercantile and financial capitalism, on the one hand, and industrial capitalism, on the other. If we make this distinction—and we should make it, simply because medieval commercial and financial "capitalism" encountered limitations in its growth potentialities which only modern industrialization overcame successfully—the importance of the Calvinist ethic appears to have been not in having created a "spirit of capitalism" as such, but rather in having contributed to its generalization among all classes and in having altered profoundly, in this manner, existing traditions and norms of entrepreneurial behavior. This process went furthest in Britain, Holland, and the countries colonized by British and Dutch settlers. It was much less conspicuous in France, and the persecution and final expulsion of the Huguenots were measures which enhanced the rigidities and relative "backwardness" of entrepreneurial thinking and action in France.

In the course of French economic development there were, of course, a number of turning points in which the old entrepreneurial traditions could have been broken and replaced by new ones. One such turning point was the beginning of the rule of Napoleon III. Another was the conclusion of the religious wars in the reign of Henry IV. At that time the hegemony of the financiers was reinforced; the industrialists were clearly pushed into the back seat, and, as if to impress upon them their political and social impotence, they were taken under the tutelage of the government. I began my account with the religious wars and their outcome because it appeared to me that the system created by Laffemas and Sully and their contemporaries constitutes an important factor influencing the traditions of French entrepreneurship.

This, then, in a sketchy and perhaps overly abbreviated form, is my "sociology," if it deserves that name. I thought that I could omit any extended discussion of this problem in my paper because I did not consider it my task to write an economic history of Britain and France within which the factor of entrepreneurship had to be "explained" and placed "into its proper perspective." I preferred to discuss, instead, the relationship between the forms of entrepreneurship actually realized in each country and the general impact of entrepreneurship on capital formation and economic growth.

For this reason I believe also that I need not discuss in detail the alternative explanation for the different growth rates of Britain and France tentatively suggested by Reubens. But I do wish to say that his interpretation appears to be impossible to prove and is stated in such general terms as to be of little use as an explanation. He says that Britain had a head start, that this head start was "stimulated by the profit inflations flowing from wars and monetary expansion," that France seems to have been "held back . . . by the difficulties of following closely behind the leader without an equally favorable geographical and cultural environment. . . ." But what matters, above all, is to explain why Britain had a head start, or rather why she got to the top in the course of the seventeenth and eighteenth centuries. I believe that the differences in entrepreneurship go a long way toward such an explanation. Moreover, France experienced a profit inflation from wars and monetary expansion, just as did Britain. And I can see no reason why France's following closely behind Britain should be a special handicap. It is significant, however, that as time went on, France fell more and more behind and in the nineteenth century was overtaken by Germany and the United States. Finally, I agree with Reubens that the geographical and cultural environments were of great importance in the slowness of France's development, especially the latter. But by drawing attention to these factors we have not really explained the difference in growth rates. In discussing entrepreneurship I have selected an aspect—and, as I believe, an important aspect—of the "cultural environment" and have attempted to trace its form and impact through the decisive periods of the economic development of the two countries.

PART IV

THE INFLUENCE OF ENTERPRISE AND BUSINESS ORGANIZATION IN UNDERDEVELOPED COUNTRIES