

ENTREPRENEURSHIP, DUALISM, AND CAUSALITY:

AN APPRECIATION OF THE WORK OF

JOSEPH A. SCHUMPETER

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EDITOR'S NOTE

William R. Waters' doctoral dissertation was completed at Georgetown University in July 1952 but otherwise never was published. It truly is a seminal work in that Waters calls attention to the difference in economic agency between the *passive individual* of mainstream economics and the *active person* of a different economics that many years later became known as personalist economics. He skillfully attributes this development to Joseph Schumpeter who "restored the human person as the dynamic factor in the expansion of economic activity" (p. 14).

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Edward J. O'Boyle
Mayo Research Institute
March 2012

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CHAPTER ONE

INTRODUCTION

To appreciate the investigations that follow, the reader must be fully conscious of our debt to Aristotelian metaphysics. It does not seem possible to us that pure theorists and historians can meet at any place other than where the grave problems of causality prevail. Any attempt of the social scientist to circumvent this position because perhaps he prefers to recognize it as the realm of the metaphysician is unfortunate indeed. Such a decision is more than a lack of courage; it leaves too many important questions unanswered. Furthermore, a simple exposure to the nature of causality does not impair the social science by introducing unnecessary obscurity. Rather, it offers immediately a very useful methodology which gives a full and clear answer to any problem wherein change is involved and adequate data are present. We attempt below to substantiate this claim by reviewing Aristotle's classification of the four aspects of the cause of a change and by applying these to economic-historical events.

Whenever and wherever a change takes place, we may look for a cause. A cause is that which can be said to contribute something to the existence of a thing. More strictly, a cause is a principle upon which something else depends for existence. It is the great contribution of Aristotle in these matters that he showed that in order for change to be possible four things must take place.¹ First of all, there must be something to be changed.

¹ There is a large bibliography readily available to explain the Aristotelian principles of causality. In this chapter, extensive use has been made of the following: Aristotle, *Physics*, especially book II, number 3; St. Thomas Aquinas, *Commentary on the second book of Aristotle's Physics*, Lecture 10; Francis Aveling, "Cause," *Catholic Encyclopedia*, III, 459-467; R.P. Phillips, *Modern Thomistic Philosophy* (Westminster: Newman, 1935) volume II, chapters 9, 10, and 11; and Brother Benignus, *Nature, Knowledge, and God: An Introduction to Thomistic Philosophy*, Milwaukee: Bruce, 1947.

In Aristotle's example of a work of sculpture it is the bronze. Secondly, there is the idea or form which is imposed upon the material, e.g. the image of the finished product which the sculptor envisions. Thirdly, there must be an active agent that produces the change; in Aristotle's example that is the artist himself acting upon the bronze. Finally, there must be a motive or reason why the agent acts, e.g. perhaps the sculptor hopes to produce a master-work of art. Each of these types of causes combines to offer a complete fourfold answer to any problem of change. We treat each of them in more detail as follows:

The first is termed the material cause and answers the question, what is determined? or to ask it in another way, what is that which is changed? The material cause may be defined in a variety of ways but if examined each is found to refer to identically the same thing. The material cause is that out of which the effect is made or caused; or it is that out of which a thing comes to be. What comes to be must come from something which was it potentially; the material cause therefore is matter of indefinite potentiality.

Secondly, the formal cause may be identified by asking the question, how is the matter determined? or how does the matter differ in its changed condition as contrasted with its prechanged state? The formal cause is that idea that guides or actualizes the potency of the material cause. It is the actualizing, specifying, determining principle which exists in the effect. Aristotle calls it the form or archetype, the statement or expression of the essence. In short, it is that which makes the effect to be of this (not that) particular kind.

Thirdly, to identify the efficient cause we ask who or what determined the change? who or what actively brought it about? In order that the matter might pass from its potentially being the changed product to actually being it, it must be moved by an agent;

this agent is the efficient cause. The efficient cause is that which by its operation or agency the effect is brought into being; by its operation the formal cause of the effect is induced in the material.

Lastly, the final cause is discovered by answering the question, why is the change determined? We seek here the motivation. The final cause is the principle on account of which the efficient cause – the agent – moves toward the production of its effect; it is that for the sake of which the effect of an action is produced. At first sight, this cause appears to be the easiest to uncover; actually, however, it is the most complex and the most difficult to locate. This is so for two reasons:

First of all it is difficult to reconcile final causality with inanimate bodies. Brother Benignus following the argument of St. Thomas shows that while inanimate bodies do not have any knowledge of the ends toward which their actions are directed, yet their actions do nevertheless tend toward these ends by their nature.

The regular, orderly, and beneficial character of the activities of physical agents inescapably implies in them natures which tend to their own development and so operate as to allow goods which perfect them.¹

The second reason why final causes are difficult to locate is because there are a series of final causes. It is not necessary for our purposes here to go into detail: we simply mention the first general sub-division. The final cause may be considered either objectively - the actual result of the efficient cause; or subjectively - as the effect desired by the agent. The two need not coincide; for example, an innovator's motive for initiating a firm may be prestige, but the rules of the game of business in the capitalistic system require that the objective of a business enterprise be profits.

¹ Benignus, op. cit., 72.

Aristotle's demonstration that there is a fourfold nature to all changes is very helpful to the social scientist. An historian, say, will not feel he has completely and satisfactorily interpreted an event in the past unless he has uncovered all four aspects of the situation. An example of the use of this methodology is found in the writings of Schumpeter. Schumpeter tells us what is necessary in order to understand the situation that existed in England around 1850.

What we observe is (not a simple increase of factors and physical capital which are the causes of the great changes of this era but) rather a behavior pattern, possibly supplemented by a schema of motivation; a typical way of giving effect to the possibilities inherent in a given legal and social system both of which change in the process; the effects of entrepreneurial activity upon the industrial structure that exists at any moment; the consequent process of destruction and reconstruction that went on all the time.¹

It is quite clear that Schumpeter's semi-colons separate the four Aristotelian causes. He insists that this historical era be treated in reference to motivation; the legal and social system; the activity of entrepreneurs; and the potentiality of the economic system to be destroyed and reconstructed. We see clearly the final, formal, efficient, and material elements respectively.

Surely, no one will doubt that this very learned man was quite familiar with Aristotelian metaphysics. Yet we have no way of telling whether Schumpeter consciously applied the methodology offered in this chapter. It is enough to say that a qualified social scientist seeking to interpret a social, economic, or historical change completely and objectively, will necessarily include these four significant elements. Even so, being

¹ Schumpeter, "Economic Theory and Entrepreneurial History," *Change and the Entrepreneur* (Cambridge: Harvard University Press, 1949) 74.

consciously aware of Aristotle's wisdom may well be an aid to efficiency and a check for completeness to an historical analyst.

Another example from contemporary literature is offered. Professor Easterbrook, speaking at the convention of the American Economic Association in 1948, mentioned the four principle approaches to the study of history.¹ This classification, Easterbrook informed us, is taken from an unpublished paper of A.H. Cole on the *Essence of Economic History*. The approaches are termed cultural, analytical, study of problems, and sociological. It is not surprising that they conform to some extent at least to the material, formal, efficient, and formal elements respectively. After all is not history – that science which has as its purpose the interpretation of past events in the course of human existence – directly concerned with changes? The cultural approach simply tells a good story and thus leaves the reader better informed about the past. The analytical approach uses history to test economic models – it imposes a specific form upon an historical reality. The study of problems approach treats history by selecting certain problems and reviewing them as focal points for a more extensive study. Finally, the sociological approach while not explained is said by Easterbrook to rest partially at least upon Talcott Parsons' brand of sociology in the study of history. It seems certain he would agree to include here, as examples, the work of Weber, Sombart, and Robertson – all of whom centered their work about motivations arising from specific theological foundations.²

¹ W.T. Easterbrook, "The Climate of Enterprise," *Papers and Proceedings of the American Economic Association*, XXXIX, May 1949, 323.

² Weber's *Protestant Ethic and the Spirit of Capitalism* which stresses the relation of the Calvinist idea of a calling to capitalistic motivation; Sombart's *Quintessence of Capitalism* – a psychology of the businessman -, his *Jews and Modern Capitalism* which shows the relationship of Judaic theology

Having this method before us it may be employed as a guide in investigations of historical phenomena. For example, suppose we would seek the causes of the expansion of the Portuguese Empire in the sixteenth century. Briefly, the most significant facts are these. A very small group of people living on the western side of the Iberian Peninsula, possessing a strong nationalistic feeling and great courage, were able to accomplish an achievement very important to the future of Western civilization. The Portuguese crushed the Arab monopoly of the carrying trade between India and the Mediterranean and were able for almost a century to dominate the whole of the Indian Ocean. Instructed, encouraged, and subsidized by a great man, Prince Henry the Navigator, a band of explorers progressed southward along the west coast of Africa.

They discovered a source of profit in Guinea. They bartered with the natives here for gold and brought back Negroes to work in Portugal. In this way they reinaugurated slavery in Christian Europe where it had almost disappeared for centuries. Under Vasco da Gama they arrived in Calicut in 1498. The Portuguese were now in an enviable position to compete with the Arabs and the Venetians. Not satisfied with commercial competition they captured Aden in southern Arabia, the gateway to the Red Sea. Thereafter they cut off Arabian commerce to Europe. This campaign was under the leadership of the greatest of Portuguese military leaders, Alfonso d'Albuquerque. Later, they took possession of Malacca on the Malay Peninsula, thus acquiring a monopoly of the supply of peppers and nutmeg.

To answer our questions with the facts at hand, we conclude that the strict (efficient) cause of the expansion of the Portuguese Empire in the east was d'Albuquerque

to the capitalist's motivation; H.M. Robertson's *Aspects of the Rise of Economic Individualism* which treats the spirit of capitalism as it concerns the Jesuits and Jansenists.

and the explorers who preceded and followed him. The agents in this case are by no means of greatest importance. Expansion would not have been possible without the great vision of Prince Henry. The work of this creative innovator brought about the discovery of a new route to India. This explains to us how the expansion came about (formal). The motive is clear. The Portuguese wished to snatch a share of the lucrative Venetian trade with the Orient (final). Finally, the material cause must be isolated. From what did the Portuguese expansion result? This might be answered partially by citing the fact that the two million Portuguese assembled an army and a navy extremely capable and courageous. We do not feel qualified to defend the value judgments made here – this is the domain of the specialist in Portuguese history. This case is presented as an illustration of methodology and seems to stand on its own feet in this respect.

We cannot overlook that the Aristotelian set of causes opens to us a new and evidently useful technique for the examination of economic systems. It matters little whether the system in question is basically historical such as that of St. Simon, Marx, Schmoller, etc., or theoretical such as the systems of Ricardo, Schumpeter, von Mises, and countless others. Nor does it matter whether the system is fundamentally static or dynamic. By this we mean to distinguish economic activity from changes in the mode of economic activity. Economic activity involves acts of economizing, that is the combining of countless inputs (production) or the directing of the components of income (consumption) in such a way as to maximize the net value of the products sold or bought. It is clear that economic activity comprises change but the change might be such that it occurs within an unchanged framework – the parameters remain unchanged. This is static analysis.

It is possible to go beyond this to explain the changes in the mode of economic activity, which is to say to give the cause for the change in the mode of economizing. Smith, Schumpeter, Marx, and others propose to do just this. By way of illustration we select what is perhaps the best known of all economic attempts at systemization – the Marxian explanation of economic development. Such an attempt is admittedly a distortion and an injustice as any abridgement and condensation must be. But, at any rate, let us see if the technique applied will unearth the basic elements and perhaps even be useful to facilitate comparison of the Marxian system with any other.

The problem is: what is the cause of changes in the mode of economic activity according to Marx? Of course Marx's main preoccupation was a particular aspect of this problem: what is the cause of the change from capitalism to communism? That is to say he wished to find the reason for the ultimate collapse of the capitalistic system and the coming into being of the stateless, classless, communistic society. We shall attempt to answer both the general and the particular problem simultaneously.

First of all, economic change is brought about as a result of the successes of the non-dominant class in conflict with the dominant. In reference to the problem of the collapse of capitalism, the change results from the success of the proletariat over the formerly dominant bourgeoisie. The efficient cause is thus apparent.

Secondly, the final cause – the motivation for the change of economic institutions – is of particular interest because human aims have only a subordinate role in the Marxian explanation. The problem of why is to be explained by the natural working out of historical evolution. It is the nature of human existence to develop as the result of class struggles. This answer applies in general and to all particular cases.

The material cause asks: from what does the change result? The general answer is found in the exploitation of the masses. Particularly and in reference to the capitalistic system, the exploitation has become institutionalized. The system itself is defined symbolically as M - C - M'. The symbols describe an exchange process which begins with money and ends with the same amount of money plus an increment; commodities in this process are only the means to the additional money, not the end of the transaction. The increment is possible only because the prevailing institutions are such that the laboring man is forced to toil part of his working day without pay.

Finally, how does the change come about? What is the formal cause? Here we must know the institutions peculiar to the mode of production in question before the answer can be given. Therefore, no general solution is possible. In the case of capitalism, however, the answer is forthcoming. The fact of exploitation does not explain the collapse. Variable capital, the potential source of exploitation, must gradually be reduced in a system that operates under the conditions of perfect competition. This is so because innovators find that it is possible to snatch temporary profit by introducing labor-saving devices, by reducing the proportion of variable to constant capital. However, the fund of profits within the whole economy has been reduced. Quite logically from this is deduced: the tendency toward zero profit rate; the concentration of industries; the swelling of the ranks of the Industrial Reserve Army; increasingly severe business cycles; and the inevitable collapse of the system.

After analyzing the work of others in the same way we shall have a common basis for a better understanding and critical comparison of economic systems.

Aristotle helps us, if we apply his method, to acquire a better understanding of the nature and extent of the science of economics. From his classification of types of causes we find the questions we must ask. Primarily, the economist must ask, what is the material out of which economic activity comes to be? To answer this first question he immediately discovers that there exist branches of the economic science which offer answers. Economic history tells him for example, of the opening of the Newfoundland cod waters to New England colonists by Captain John Smith; or it tells him of the enforced poverty of the great masses of people in Ptolemaic Egypt. Economic geography is another source of “material” knowledge. It tells the economist, for example, of the dearth of agrarian resources on the island of England-Scotland; etc.

Secondly, the economist must ask, how is economic reality organized? What is the nature of the economic order? He finds the answers in other branches of the economic science. Comparative historical-economic systems outline, for example, the characteristics of feudalism and contrast it with seventeenth century mercantilism. The theory of economic systems lays bare the framework of all possible systems; for example, it contrasts two extremes – the Walrasian and Platonic orders. Furthermore, pure economic theory – or rather principles – submits the tools, the concepts with which to analyze the system; it is to economics what logic is to philosophy. These disciplines (and perhaps some others) present the form of economic reality.

Thirdly, the economist must ask for the motives of the individuals within the society, and for the end or result of the system. Social economics helps him here. It shows the group relationships within the society, the conflicts between groups, the hierarchy of the society, etc. Also an important aid in this regard is the history of economic thought which presents

the prevailing philosophies and ideologies. The real significance of the study of economic thought is in the discovery that motivation for economic policy-making is oftentimes simply the result of an unconscious faith or confidence that statesmen have in the theorists of the recent past. To mark the importance of this source we insert a thought of John M. Keynes.

Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back.¹

Finally, the economist must concern himself with the active determining factors of economic change. The determining factors in the strict sense are the agents by whose actions the change occurs. Here the economist must acknowledge all types of factors, even those external to his science. For example: the Civil War affected the business cycle substantially – a political factor; the transfer of the herring spawning grounds from the Baltic to the North Sea in early modern times affected the economic growth of England – a geographical factor. The economist's chief concern in this regard, however, is the entrepreneur as innovator – the changer of economic reality within the economic organization itself. That the actions of these innovators might be studied a whole new discipline has been born – the study of business history.

In short, a methodology based upon the four causes of Aristotle is useful to the social scientist in many ways; not the least of which is in the formation of a classification of the subject-matter of economics. No longer is it possible for us to fail to consider any of the four important elements involved in economic change. No longer is it possible to neglect:

¹ John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (New York: Harcourt, Brace, n.d.) 383.

the natural resources, the motives, the institutions and customs, or the creative activity of men.

A final remark on the methodology employed in this work must be a word of caution. That this technique must be an infallible guide to the four substantial causal components of any change in social phenomena is not demonstrated or even claimed. It is enough – and of this much we are certain – that the method forces the historian, sociologist, etc. to make his investigation extensive. He may feel more confident that a significant source of the change has not been neglected; he may be delightfully pleased to find that for any investigation wherein change is involved he has a pattern that guides him so that unless answers to who or what? why? from what? and how? are found his task has not been completed. The important thing is not the examination of the method (in the sense, say, that the formal aspect encompasses this particular segment and not that) but rather that the student has at his disposal a ready-made and valuable technique to analyze changed reality.

It is our task in this work to select one specific aspect of economic activity, entrepreneurship, with emphasis upon the agent who performs this function, and examine it with the help of the Aristotelian technique described above. Our task is simplified – in fact almost outlined – by the very complete definition of entrepreneurship given by Professor Cole:

Entrepreneurship can be defined as the purposeful activity (including an integrated sequence of decisions) of an individual or group of associated individuals, undertaken to initiate, maintain, or aggrandize a profit-oriented business unit for the production or distribution of economic goods and services with pecuniary or other advantage the goal or measure of success, in interaction with (or within the conditions established by) the internal situation of the unit itself or with the economic, political, and social

circumstances (institutions and practices) of a period which allows an appreciable measure of freedom of decision.¹

Cole shows entrepreneurship to be an activity. It is evident that a complete and adequate definition of an activity will be subject to the four causes: clearly change is involved in any phenomenon of activity. Furthermore, it is quite remarkable that the four aspects of causality are clearly pointed out, although we feel confident that Professor Cole did not consciously seek the aid of Aristotle. If we remove the essential notes of the definition and list them, we find that they easily fall into the expected classification:

1. the initiation, maintenance, and aggrandizement efficient;
- 2a. the goal, pecuniary or other – a subjective final element;
- 2b. the profit-oriented business unit – an objective final element;
3. the production and distribution of economic goods and service which, we interject arise from potential economic factors – material;
4. the conditions, institutions, and practices prevalent wherein the entrepreneur operates – formal.

We plan to focus our attention on entrepreneurship and the entrepreneur from the four points of view found in this classification. First of all, however, we wish to trace the concept of the entrepreneur in the history of economic thought. We shall find here the entrepreneur as innovator – which concerns us chiefly – as well as others (chapter II). Chapter III will be concerned with the aspect of finality, and a synthesis of views pertaining to economic motivation will be attempted which it is hoped will unearth some interesting observations on the incentives to economic action. We wish to give recognition to the great man who restored the human person as the dynamic factor in the explanation of economic activity.

¹ Arthur H. Cole, “Entrepreneurship and Entrepreneurial History: The Institutional Setting,” *Change and the Entrepreneur*, 88.

The influence of the late Professor Schumpeter is strong throughout this investigation even where his name does not appear. For this reason we feel it is necessary to employ the subtitle “An Appreciation of the Work of Joseph A. Schumpeter.” Moreover, the fourth chapter (IV) will be devoted almost exclusively to Schumpeter. We shall inspect here the entire groundwork of economic reality as analyzed in his theoretical work. It is here that we shall concern ourselves with the material from which this active agent fashions economic life – we shall concern ourselves with what is changed. We must do this theoretically, removing all unessential notes; otherwise our investigations will be reduced to the enumeration of economic goods and services, potential factors, all historical and geographical phenomena, and all institutions and techniques subject to change. The only material aspect of entrepreneurship that will interest us is the theoretical, primitive concept of the Kreislauf. How entrepreneurship comes about – or how the entrepreneur performs his innovational function may be investigated from at least two vantage points. The various elements that combine to actualize entrepreneurial activity may be abstracted and listed as a concatenation of logical steps. This has been done by Schumpeter and we plan to review this process also in chapter four. The other aspect of form in entrepreneurship concerns the tradition, customs, and practices found in the environment wherein the entrepreneur operates. We do not plan to consider this fully, but some remarks will be forthcoming as a result of the study of the role of the entrepreneur in his community and society (chapter VI). It is not possible to confine the activity of the entrepreneur in the strict sense (his efficiency) to any one sector of this work. The entrepreneur as the active, dynamic, economic agent will be found in all chapters. Nevertheless, chapter (V) will be

exclusively devoted to this consideration: here we shall bring together some observations and remarks on the “creative” activity of the entrepreneur.

There is another quality persistent in changing actuality that must be noted besides the fourfold aspect of causality. The Aristotelian method of inquiry forces the investigator to recognize continually that reality is essentially dualistic. He observes sets of concepts, matter and form, body and soul, things and ideas, extensions and relations that are the evidences of this. Moreover, whether attention is focused upon the unceasing motion of the physical universe, or upon the continuity of historical evolution, one sees what appears to be evidence enough to justify an additional set of such concepts: opposing and contending forces are found to change and disrupt on the one hand, to stabilize and equilibrate on the other. This thought is fundamental to chapter (VI) and so stated explicitly there. But before we indicate more generally the theme of this chapter perhaps it would be well to list some illustrations to clarify this twofold conception of life, reality, and history.

Perhaps the most profound insight is to be found in Berdyaev’s explanation of “the meaning of history.”¹ History unites two elements, the “creative” and the “conservative.” The conservative is “the tie with the spiritual past, an inner tradition, and an acceptance of the sacred heritage of the past.” It is its function to preserve what has already been accomplished, to uphold the faith in the covenants of the past. The dynamic-creative element, on the other hand, is irrational yet personal; it underlies human freedom and the free creative subject. It is an urge toward self-fulfillment; or rather, without it fulfillment of the historical process is impossible. History is progression and this is made possible only because Christianity introduced this historically dynamic element. History has a “point of

¹ Nicolas Berdyaev, *The Meaning of History* (London: Bles, 1949) especially 27-36, 146.

departure and a goal, a centre and a purpose. It both ends and begins with the fact of Christ's Revelation." Because of this, the historical process has an immediacy and a non-recurrent uniqueness which was foreign to the pagan world. The pagan world could not recognize this element for it had no conscious knowledge of that freedom of the subject to create history. This is particularly true of the Hellenic world with its stress upon form. "In art, philosophy and politics, in every sphere of Hellenic life, the principle of formal perfection always predominated over those of matter and content involving the irrational motive of human life." As a result, the Greeks interpreted the world aesthetically, as a well-ordered and harmonious cosmos.

The most representative Hellenic thinkers conceived creation as something static, as a sort of classical contemplation of a well-ordered cosmos. This is true of all the great Greek philosophers, who could grasp neither the historical process nor that of historical fulfillment. To them history had no issue, no goal, no beginning even; in it everything was recurrent, eternally rotating and governed by a cyclic motion.¹

To recognize this formal perfection is to recognize one of the complements of the nature of reality. For such form and regularity and harmony – if we may take liberties with Berdyaev's exposition – is also a reflection of the conservative element in the world. Christian philosophy of history combines the Jewish contribution of Messianism, its aspirations towards the future and all its other dynamic qualities, with Hellenic statical regularity and fixity. The historical process is not possible without their union. It presupposes an interaction – a clash – between the two elements: the unfathomable mystery of human freedom and of mutative activity on the one hand; and Providence, divine fatality, necessity, and immutable lawfulness on the other.

¹ Ibid., 27-8.

Of course, no one suspects that the interaction of these opposing elements is restricted to history. There are countless manifestations of it in every conceivable sector of reality. For example in genetics, Galton's law of regression portrays a hidden conservative element operating in such a way that the heights of offspring tend to regress back toward the mean of the race in spite of the strong hereditary influence of the parents; in zoology, entomologists have been amazed to find that insects have countered the efforts of men and of other enemies to destroy their race by increasing the number of larva per breeding, i.e. by propagating (say) septuplets rather than quadruplets; in geography, immediately within the aftermath of a volcanic disruption we notice forces laboring to level off the peaks and troughs that the area might recover its former condition; in economics, the entrepreneur disrupts the economic world by innovation but almost simultaneously others begin to make adjustments to the change which will result, says von Mises, if not interrupted by a further change in data, in the emergence of an evenly rotating economy.

Nor can we say that Berdyaev alone has offered an explanation of the dual, conservative-progressive element in life and history. In fact, it is clearly recognized by Boulding in the following statement:

A satisfactory theory of history must consist of two elements: an understanding of the principles of ecological equilibrium and succession, and an ability to recognize mutations when they occur.¹

Furthermore, we have occasion to notice it below in the work of Freud, Veblen, Pareto, and Solterer. Still others may have been mentioned. To cite but one, it is inherent in the work of Prof. Zipf.² Zipf has attempted to show the universality of the observation that when the

¹ Kenneth E. Boulding, *Religious Perspectives of College Teaching in Economics* (New Haven: Hazen Foundation, n.d.) 11.

frequencies of an organized frequency distribution are ranked they form a harmonic series. This remarkable regularity results from the tension and interaction of a conservative and a progressive factor, “the force of unification,” and “the force of diversification” respectively. This opposition of contending phenomena may be made methodologically useful to the study of economics. We do not intend to do more than touch upon this idea here. In fact, it is surely worthy of a full investigation of its own. However, it is at the heart of chapter (VI). This final chapter is concerned with the changing of the structure or form of society – what we shall term “system entrepreneurship.” We shall attempt to find impressive examples of this and to examine the proposition that du Pont – as an illustration of system entrepreneurship - may be useful when referred to the principles of social organization. Is it imperative to recognize that the vocational group requires developmental and therefore innovational factors as well as security and social stability? If so, does du Pont as an innovational firm satisfy this requirement? These are the questions to be raised in the final chapter of our work.

² George K. Zipf, *Human Behavior and the Principle of Least Effort* (Cambridge: Addison-Wesley Press, 1949).

CHAPTER TWO

THE ENTREPRENEUR IN ECONOMIC THOUGHT

Introduction

We are concerned here with the study of the significant human agents who operate in the economic world. Let us begin by designating various types. Some help is forthcoming from the theory of distribution wherein each agent is allotted an income peculiar to the service that he gives to an economic process. By treating agents from the point of view of distribution in the classical marginalist way, we dissect intellectually the whole of the income into functional shares. That agent who loans his mental and physical abilities to be used for the accomplishment of a final product is called the laborer and his payment is a wage. That agent who loans his funds (capital) is the capitalist and his payment is interest. That agent who loans natural resources of any kind is the landowner and his payment is rent. But concerning that agent whose income is profit and who is usually called the entrepreneur we meet with a difficulty insolvable with any distribution theory yet devised.

There are two approaches to the explanation of the distribution of income. If each of the agents is paid in proportion to what he has given to the final product, then the revenue per each final product may be considered as sliced into component shares and distributed. No surplus is possible because the revenue is entirely distributed to the appropriate producers. But how is it possible to measure the proper proportions? We cannot measure the skills of the various artisans except in cases of piecework. Nor can the superior skill of the manager be quantitatively evaluated. The difficulties mount as we extend measurement to the other factors. This method is not conducive to scientific analysis and so it is discarded from our consideration.

Another method is sought to measure a factor's relative contribution to the final product. The efforts of each factor may be valued in accordance with the factor's opportunity cost or supply price in a perfectly competitive market. If each factor is paid this price, then the final product may be valued as the summation of all such supply prices multiplied by the quantity of each employed.

The difference between the two methods may be explained in terms of Walras' second equilibrium equation:

$$(1) \quad b_t I_t + b_k I_k \dots\dots\dots P_b$$

$$(2) \quad b_t P_t + b_k P_k \dots\dots\dots V_b \quad <=> \quad P_b$$

where $b_t, b_k \dots$ are coefficients of production of the factor T, K, employed in consumers' good B; $I_t, I_k \dots$ are income payments for factors T, K, P_b is the market price of B; P_t, P_k, \dots are the supply prices of the factors T, K, ; and V_b is the summation of the products of b_t and P_t, b_k and $P_k \dots\dots$, the cost of production "value" of B. In the first mentioned method, P_b is the known market price and the factors are remunerated in proportion to their share in the production of the final product. The total revenue is then distributed accordingly. I_t, I_k, \dots are unknowns. In the second, the value of V_b is unknown – regardless what the market price may be.

In reference to the second method of approach, the total amount that the enterprise must pay for all factors will be determined by the output and the opportunity costs. That output where the price of the factor is equal to its marginal revenue productivity is the most profitable output. The total revenue flowing to the enterprise due to this factor is then its average revenue productivity times the quantity of the factor employed. Even under short-run conditions of perfect competition average revenue productivity need not equal

marginal revenue productivity. Total revenue (ARP times the quantity of the factor employed) is greater than total cost (MRP or its equivalent, the supply price of the factor, times the quantity of the factor employed). So a surplus over and above all opportunity costs accrues to the enterprise.¹

On the basis of this introduction to the theory of distribution we ask the significant question, what is profit? Turning to the history of economic thought we are offered a variety of answers all of which – considered in terms of distributional analysis – are reducible to two: a) profit is a superior type wage; and b) profit is a residual income. This is borne out by R.A. Gordon who offered a very excellent short summary of ideas concerning profit.² He shows that there are three different lines of thought in the literature of economics. First of all profit may be considered as the remuneration for the function of what he terms “entrepreneurship” and means thereby that an individual performs a highly-prized type of work which involves the making of important decisions and the formulating of policies. The income that this “entrepreneur” receives for his efforts is

¹ The second method may be explained in more detail: We are given opportunity costs of all factors of production used. For simplicity sake let us assume one variable factor (say T). All factors remain constant but T and T is varied. This way the contribution of T is found. The marginal productivity of T is $[\partial\pi_b \div \partial T_b]$ where π_b is some share in the production of B. This is valued by the price of the product. The marginal revenue productivity of T is therefore $[\partial\pi_b \div \partial T_b] \times P_b$. This factor (T) will be imputed until the marginal revenue productivity is equal to the price of the factor T, i.e. b_t will be found where $P_t = [\partial\pi_b P_b \div \partial T_b]$. Total cost of all T's used equals $P_t b_t - [\partial\pi_b P_b \div \partial T_b] \times b_t$. But total revenue from T may or may not equal marginal revenue productivity due to short run fluctuations, deficiency of complete dividibility, lack of mobility of agents, and the like. Total Revenue from T equals total cost of T plus a balancing item; the average revenue productivity of T times the quantity of T employed equals the marginal revenue productivity of T (the price of T) times the quantity of T employed plus or minus a surplus or deficiency. In conclusion, to whatever payment we give the name profit, it must be either a) a payment to an agent such as T and so a wage, payment for risk, etc. If so it is simply a cost and there is no need to distinguish it by a different name. Or it may be b) a payment of the surplus – a non-cost item that is a residual payment. So in some way it is unearned and thus exploitative if received by any agent.

² Robert A. Gordon, “Enterprise, Profits, and the Modern Corporation,” *Readings in the Theory of Income Distribution* (Philadelphia: Blakiston, 1946) 560-1.

termed profit. There is no reason why the services given to the enterprise by this agent should not be remunerated by a wage. Consequently, if that agent is substitutable, it is simply a rent like all wages.¹ The second theory of profit is the residual theory. Profit is the final residual income “after due allowance has been made for interest on capital and wages of management,” and we might add, all other costs or rents. If you consider this residual to be the result of friction necessarily existing in all economies or the result of uncertainty, then what agent can rightfully claim this income as the payment for his contribution to the final product? Clearly no agent can make this claim because no one either brings about the friction which is assumed in this case to be natural or no one initiates the uncertainty which is also natural. Profit becomes a payment received by someone who has not earned it. The same is true of the third classification of profit theories. Profit is the result of some strategic position that arises due to the institutional nature of the economy. Clearly no agent earns this profit by any performance or action and so profit becomes an income of exploitation.

We are forced to conclude, therefore, that profit is either a peculiar type of wage – wage of superintendence or the like and thus a rent – or else an income of exploitation if received by any agent. We have been led to this through a consideration of prevailing distribution theories. Any survey of economic literature bears out that whenever profit and the profit-taker are analyzed from the point of view of distribution alone, profit either does not arise to a level independent of wages, rent, or interest, or else, if independent, it is an income payment that is considered unwarranted relative to the output.

¹ “The national income is made up of profits plus the different kinds of rent falling to the various means of production. Wages also are nothing but special kinds of rents.” Bertil Ohlin, “Some Aspects of the Theory of Rent: von Thünen vs. Ricardo,” *Economics, Sociology and the Modern World*, Essays in Honor of T.N. Carver (Cambridge: Harvard University Press, 1935) 182.

As long as we concern ourselves with the function performed and the payments received from them – as long as we remain exclusively in functional distribution theory – each agent is allotted a role of equal importance. There is no hierarchy of position among capitalists, landowners, and laborers; nor among interest payments, rent, and wages. All are equally necessary. However, we find that we cannot restrict ourselves to distribution theory and expect to discover the real nature of man's various economic functions. When we begin a consideration of the functions of personal rather than productive agents we soon discover that an agent arises who is the leader of an enterprise. This leadership encompasses many things, among them: the leader guides the enterprise into strategic positions; he consciously employs to the firm's advantage the uncertainties of the future; he changes the institutional framework of society; he creates demands. In short, the leader changes things around in the economy. Immediately, a hierarchy of importance arises. This leader is the vital factor in the undertaking. The capitalist, landowner, and laborer, follow his leadership. The two former agents, when acting in their specific capacities as capital and land providers, simply add impersonal contributions. In short, their role is a subordinate one.

Now profit can accrue to an individual for functions such as those ascribed above to the leader. Profit here is functional because it is the result of this leader's operations and therefore is not a payment of exploitation. However, the income itself is a residual because it is a surplus remaining after all agents have received their marginal product. Profit results from the competitive advantage of this leader's firm over another firm producing a like product, this advantage having been brought about by the activity of the leader. Profit

is thus relative to the individual firm, unlike other income payments – interest, wages, etc. – which have the tendency to spread throughout the economic region.

The Entrepreneur in the Literature of Economics

It seems evident from what has been said thus far that to gain a full understanding of economic reality an active place must be reserved for man in the economic process. In this regard, two problems are of first importance: how to evaluate the human factor; and how to explain economic change. The great contribution of contemporary economic theory is the recognition that these problems are to be treated jointly. The new spirit of modern theoretical research is exemplified by Doctor Fritz Redlich in his criticism of Classical economics. The Classics, says Redlich, transplanted Newtonian physics into social science and in doing so they concealed the role of business leadership. Today, continues Redlich, this is being abandoned for two reasons: economic development, wherein the innovator is essential, is supplanting static theory; and, intensive research in the field of business administration is showing the importance of the leader in both the small firm and in the large corporation.¹

Regardless how economic development is explained, the pivotal human element in the process is usually termed the entrepreneur. The great deficiency in the past has not been his absence; but rather, causal priority has been given to non-human elements viz. savings, population, overproduction, and the like. More specifically, causal priority has been given to what must be designated as either material or formal causes. This is not to imply that theorists have agreed as to the essential function of the entrepreneur. On the

¹ Fritz Redlich, "The Business Leader in Theory and Reality," *American Journal of Economics and Sociology*, VIII (April 1949) 223.

contrary, definitions are many and varied. It will be helpful to us to review this concept in the literature of economic theory.¹

The explanations of the entrepreneur may be summarized into four classifications: (I) the type which predominates in French Literature – the director of profitable enterprises; (II) the entrepreneur generally accepted by British theorists of the nineteenth century, i.e. the entrepreneur identified as capitalist; (III) the entrepreneur as the risk-taker; and (IV) the type which assumed special importance in recent years – the innovator.

If it would serve any imaginable purpose, we might designate the four entrepreneurs according to the nationalities with which they are commonly associated. This is possible because the innovator has made its way into international distinction only after development in the literature of the German Historical School – with the great exception of the treatment of it by Jeremy Bentham. Furthermore, two of the very important names associated with the concept of the entrepreneur as risk-taker – Hawley and Knight – are Americans. Consequently, we have the French, British, American, and German conception of the entrepreneur. Such designations are unnecessary, however, and need not concern us further.

I

The term entrepreneur was introduced into economic theory by that Scotsman, Richard Cantillon, who wrote in the French language during the first third of the

¹ We draw heavily in this treatment from: Francis Y. Edgeworth's "The Theory of Distribution," *Papers Relating to Political Economy* (London: MacMillan, 1925) 13-60; Maurice Dobb's *Capitalist Enterprise and Social Progress* (London: Routledge, 1925); Dobb's "Entrepreneur," *Encyclopedia of the Social Sciences*, V, 558-60; Charles Tuttle's "The Entrepreneur in Economic Literature," *Journal of Political Economy*, XXXV (August 1927) 501-21; and Joseph A. Schumpeter's "Economic Theory and Entrepreneurial History," *Change and the Entrepreneur* (Cambridge: Harvard, 1949) 63-84.

eighteenth century. His explanation involved the dominant French characteristic, “work of direction.” This idea remained alive in the writings of the Physiocrats but culminated in the work of Jean-Baptiste Say.

Among the Physiocrats we find that Turgot is an excellent example. To this Frenchman, a capitalist is the owner of an accumulated fund of value. An entrepreneur is a peculiar species of capitalist. He invests his funds in a business enterprise. By definition, the entrepreneur is an employer who invests capital in a business which he owns, organizes, and manages. The emphasis is upon the entrepreneur’s function of business manager. He is remunerated for this directive labor by an income which is termed profit.¹

According to Say², the function of the entrepreneur is the practice of the difficult art of superintendence and administration. This requires a combination of rare moral qualities: judgment, perseverance, and a knowledge of the world, as well as of business. Moreover, the entrepreneur is the calculator. He must compare costs with expected market values. He must estimate the importance of a specific product and the probable amount of demand. He must decide the number of employees to hire and then find them. He must decide which raw material to buy and how much. Furthermore, the entrepreneur, whether he be a merchant, manufacturer, or farmer, is the person who obtains the needed resources and services – the men, capital, and land. He combines them to produce a product which satisfies the demand of consumers. He pays them wages, interest, and rent. In short, he is the intermediary between all elements in the economy. The income of this entrepreneur is termed profit. This profit, says Say, is a remuneration for the work of superintendence, i.e.

¹ Cf. Charles A Tuttle, *op. cit.*, 503.

² Cf. Jean-Baptiste Say, *A Treatise on Political Economy*, translated by C.R. Princep from the 4th French edition (Philadelphia: John Grigg, 1841) book 2, chapter 7, 329-54.

a peculiar type of wage. More specifically, this is the profit of industry – the profit of the master agent – as distinguished from interest – the profit of capital. By thus separating profit and interest, the French, through Say, are not led into confusion as the British were by identifying the entrepreneur with the capitalist.

The business director of Say developed into the no-profit entrepreneur of Leon Walras and John Bates Clark. We shall treat later the Walrasian entrepreneur in reference to his role in Schumpeter's pure model. Concerning Clark, the work of this theorist and other Americans, can adequately be evaluated only by an appreciation of the entrepreneur in the writings of Francis A. Walker.

The contribution of Walker was in no way original but his influence was great. Before him, there was no clear distinction between interest and profit among economists writing in the English language. Walker removed the confusion resulting from this deficiency by clearly describing a special and definite function for the entrepreneur. He decried the fact that although his father and Say had originally stressed the importance of the entrepreneur, orthodox economists had ignored their work and had continued to identify the entrepreneur with the capitalist (e.g. Mill) or else considered him simply a superior laborer (e.g. Barone).¹ We look to the entrepreneur, explains Walker, to furnish the productive needs; but this function is insignificant. Much more important is the furnishing of technical skill, commercial knowledge, and the powers of administration. Moreover, the entrepreneur assumes responsibilities and provides against contingencies; he shapes and directs production; he organizes and controls industrial machinery. His motive

¹ Cf. Joseph Dorfman, *The Economic Mind in American Civilization* (New York: The Viking Press, 1949), III, xix.

for doing these things is solely to procure profits. “His entire personal interest is found here.” Even risk-taking enters Walker’s treatment – although it is in no sense an essential characteristic of his definition. The entrepreneur – say a manufacturer – will take as his income all that is left after the overseers, clerks, mechanics, laborers, and “operatives” have taken theirs. It is not impossible that the unpredictable occurrences of our world deprive the entrepreneur of his share; but this is the risk he must take.¹

To the members of the Lausanne School on the continent, the entrepreneur became almost exclusively a factor of distribution. This was also the case with the American, John Bates Clark. Man’s role in production is not denied, but the productive process itself is subordinated to an explanation of the distribution of income. This means the disappearance of the theory of development and the birth of at least one non-real abstraction, the no-profit entrepreneur. It is the merit of the English love for the empirical that British theorists protested that this intellectual construct – which was not without its use as we shall see – has no concrete form in actual existence. For example, realizing profit to be the specific income of the entrepreneur, Edgeworth refuses to acknowledge that a no-profit entrepreneur deserves a special place in his classification of entrepreneurial types. “A fig which bears no fruit is not therefore a tree of a distinct species.”²

We find in Clark’s work³ a clear distinction between the entrepreneur, wage-earner, and capitalist. The function of the entrepreneur as such, says Clark, includes no working and no owning of capital. “It consists entirely in the establishing and maintaining of

¹ Francis A. Walker, *Political Economy* (New York: Henry Holt, 1888) 173-4, 188, 232-3.

² Edgeworth, *op. cit.*, I, 16.

³ John Bates Clark, *The Distribution of Wealth* (New York: MacMillan, 1899), 3-4, 203-4, 289-290.

efficient relations between the agents of production.”¹ The function then is purely the work of coordination, the rewards for it are called profits. Free competition will assure that each factor receives a distinguishable share in production and to each will flow a corresponding reward. The laborers receive what labor “creates”; the capitalists what capital “creates”; and the entrepreneurs what the coordinating function “creates.” Each agent of production must be paid by the entrepreneur according to his share – his marginal product. This share is the residual that comes as payment to the coordinator. Residual income or pure profit – the two are synonymous – disappears completely when the forces of pure competition prevail. Only an economy out of balance gives profit to someone. The movements of the coordinator bring the economy ever closer to a profitless economy. The entrepreneurs do the moving but it is competition that guides them in the direction that they move.

II

Let this suffice concerning classification number one, the entrepreneurial activity as a work of direction. We pass then to a brief consideration of the entrepreneur as capitalist. This concept, not unlike the concept of the entrepreneur as director, had its origin in the French literature of the eighteenth century. Among the physiocrats, Quesnay sometimes uses the term in the typical French manner described above – and so for the most part do his followers. For example, in one place he speaks of the entrepreneur as a person who “manages” an agricultural business on land owned by another. But Quesnay also uses entrepreneur to mean an independent owner of a business; and in another place, as a person, who lives on his revenue without working.² It is in the sense of the entrepreneur as

¹ Ibid., 3.

² Tuttle, op. cit., 502.

owner that Adam Smith, while in France, seems to have been influenced concerning man's role in economics.

It is helpful to know the nature of that entrepreneur brought to England by Smith, but even more important is the influence of the physiocrats' general philosophy of history. It seems quite clear, now that these matters are receiving more consideration, that Smith's famous critique of the physiocrats in book IV of *The Wealth of Nations* is insignificant. Smith's criticism of the idea that commerce is but a branch of the tree of agriculture cannot be compared in importance to his wholehearted acceptance of the physiocratic explanation of the nature of human existence. That this has been often neglected by the historians of economic ideas is probably due to the prominent position given to Quesnay, rather than to the more philosophic treatments of (say) Mercier de la Rivière and du Pont de Nemours.¹

It is not our purpose here to insert a review of eighteenth century French philosophy but the following basic principles must be kept before us. Following the deistic mode of the day, the physiocrats tell us that there is a natural order of irrevocable laws ordained by God for man's happiness. This school of thought is natural then in a cosmological sense. The fact that it is also natural in a biological (or physiological) sense is of secondary significance. It is man's first duty to discover and understand God's laws. This can be done with facility by the processes of human reason, by reflection and judgment. It is man's second duty to bring himself in conformity to these laws. This can best be accomplished by each individual acting in accordance with his own self-interest. Furthermore, the propensity of each individual to seek his own self-interest brings about the general good.

¹ Thorstein Veblen is a great exception. Cf. his "Preconceptions of Economic Science I," *The Place of Science in Modern Civilization and other Essays* (New York: Huebsch, 1919) 82-113.

The latter is the Helvetian influence. Man's role in the economy is passive and conformative, not active and creative. Progress does not result from doing and changing; but from knowing and following. Men work, benefit, economize, and save, remarks DuPont, but only God produces; for "economiser n'est pas produire."

The two duties are rationalistic and individualistic. But Physiocracy is also a "liberal" economic philosophy. Great happiness will never be possible without a vast abundance of personal wealth. But man must possess complete liberty to enjoy this abundance in whatever manner he himself decides. Moreover, the need for a free society is even more than this because the increase of opulence itself depends upon the growth of perfect liberty. In summary, the School of Physiocracy is natural, rational, individualistic, and liberal. It is not surprising that we discover all of the essential notes of Smithian economic philosophy even before we open *The Wealth of Nations*.

Smith introduces his great work by saying that it is an attempt to discover the causes of improvement in production and distribution. Moreover, says Smith, we trace these causes to the skill, dexterity, and judgment with which labor is applied. So clearly therefore does he see the great problem of the science of economics – the problem of economic development – that it is all the more surprising that the economists who succeeded Smith neglected it. We do not reflect upon the errors of nineteenth century economic theorists - for quite often errors are not to be found – but rather upon their unfortunate choice of subject matter; they concerned themselves with matters of relatively minor importance. So much so did they do this, that nineteenth century economic theorists may in some future age be criticized for their utility theory of value, concepts of perfect competition, and the like, in much the same way that the late medieval Scholastics have

been criticized for speculating (say) on the relationship of quantity and angelic nature. Regardless how much of the work of Schumpeter we accept, we must readily admit that he is responsible for reintroducing into economic literature the great “inquiry into the nature and causes of the wealth of nations.”

The product of man’s skill, dexterity, and judgment results in an increase of the division of labor, which in turn means improvement. To put these Smithian terms into modern economic language, we can say that innovation is the essential cause of economic development.¹ To Smith, the innovator is not usually the owner or manager of the business enterprise, but more often the common workman. “A great part of the machines made use of in those manufactures in which labor is most subdivided, were originally the inventions of common workmen, who being each of them employed in some very simple operation, naturally, turned their thoughts toward finding out easier and readier methods of performing it.”² However, the workmen receive the opportunity to innovate only in proportion to the quantity of capital which is employed in setting them to work. Skills are always available; they need only to be given the condition wherein to operate. This condition, the quantity of capital stock or capital accumulation that makes possible the improvements of the workers, is the result of the thrift and frugality of the citizenry.

Even though Smith seeks the causes of the increase of wealth, he actually treats only one, the division of labor. Others are only mentioned from time to time in his text, viz. increasing control over nature, political security, and economic freedom. Still with all of

¹ Cf. B.S. Keirstead, *The Theory of Economic Change* (Toronto: MacMillan, 1948) 70-1. Keirstead shows the similarity between Smith’s theory of development and that of Schumpeter.

² Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (New York: Modern Library, 1937) book I, chapter I, 9.

these, it is difficult to formulate a pure theory of development from the writings of Smith. This is so because there persists a preference for distribution theory rather than either the theory of change or production. The effects of improvement always interest Smith more than the improvement itself. This is an unfortunate deficiency but there is yet another one more serious. The improvements are always taken for granted; they come about almost automatically. All that is needed is freedom from political interference. Man's role in the economic process consists solely in liberalizing society that it might conform to the natural law. Otherwise man is lost in the automatic improvement resulting from the always available skills and capital accumulation.

So far in this chapter we have not chosen any specific definition of entrepreneur as our own. We have implied however that by entrepreneur we mean that human agent who holds the position of greatest importance in the economic process, whether he be defined as risk-taker, innovator, or whatever. In this sense, whom could we call the entrepreneur in Smithian economics? From what has been said above, he would seem to be the workman by whose skill the improvements are brought about. But we are hardly satisfied with this because Smith gives generic priority to the accumulators of stock.

As the accumulation of stock must, in the nature of things, be previous to the division of labor, so labor can be more and more subdivided in proportion only as stock is previously more and more accumulated.¹

Therefore we conclude that the important human role is played by the accumulator who becomes the capitalist. He is called by various names. He is the master, or the merchant, or the undertaker; but at all times he is a conservative and non-speculative individual. He accumulates his fortune only after a long life of industry, frugality, and attention. He is

¹ Ibid., book II, introduction, 260.

never the speculative merchant or “projector.” Smith would never agree to extend economic liberty so far as to allow the activities of projectors to be uncontrolled.

More specifically, although Smith was the first great “Liberal” economist, he would not go so far as to suggest that the interest rate should be allowed to find its own level. In fact, he said, should the legal rate in Great Britain be allowed to rise as high as eight or ten percent, the only result would be the encouragement of “prodigals and projectors” – those who alone would be willing to pay this rate. On the other hand, should the rate be kept low, much of the money would get into the hands of “sober” people where it is likely to be employed with the most advantage.¹ Jeremy Bentham was in no way satisfied with this conservative position and so took issue with Smith in a public letter on projects.²

Bentham agrees with Smith that if the rate of interest is held at a low maximum, the activities of the projects would necessarily be curtailed. But would this lessen the proportion of rash projects to good ones? Of course not – the interest rate is not discriminatory. The only effect would be the reduction of the total number of projects. Furthermore, the great Liberal was reminded by Bentham that his theory of development implies the necessity of projects.

Smith had described the progress of mankind on the island of Great Britain as constant and uninterrupted. In each historical period, the condition of the country was more prosperous than in the period immediately preceding it. But what and whom are we to thank for it? Bentham agrees with Smith in so far as he says that improvement of the laws of the land is responsible. But he shows that this is a condition not a cause. The

¹ *Ibid.*, book II, chapter 4, 339-340.

² Jeremy Bentham, *Defence of Usury Showing the Impolicy of the Present Legal Restraints...* (Dublin: Williams, Colles, 1788) 171-209.

environment, laws, institutions, and the like, regardless how conducive to liberty they are, are not in themselves economic development. In a free society, the projectors are less restrained and are free to bring forth improvements by their activity. Bentham chided Smith that his own observations should have told him this. Is not the projector by Smith's own definition the person in pursuit of wealth who strikes out into a new channel? Was not every enterprise regardless how established it now is, a project at its commencement. Was not every type of routine procedure at one time an innovation? But Bentham does not wish to be too critical. After all the word "projector" is partially at fault. It is one of those words that convey an idea of reprobation. If Smith should now re-examine his theory, surely he would be forced to acknowledge the role of these innovators and their enterprises, and would no longer be biased by a name. Nevertheless, Smith did not accept Bentham's suggestions.

Bentham describes the projector (entrepreneur) as one who is not established. (He is called a "new man" by Schumpeter). A prudent and established man will interest himself with the already successful concerns. Regardless how promising a new project appears he will have nothing to do with it. Bentham asks, what improvement could be had if all men of business were of this type? There is need then for project in society in order to have development. Greater development will only be gained by encouraging – or at least freeing – these operators.

In summary, Bentham's projector is a person in the pursuit of wealth, or even of any other object, who tries to be successful in some new line; one who aims at anything that can be called improvement. This innovation may take various forms, for example: it might consist in the production of any new article adapted to man's use; or it might be the

improvement of the quality, or perhaps the reduction of the expense, of any of those things which are already known. We shall see that Bentham's projector is remarkably close to Schumpeter's entrepreneur.

Someday a scholar might write a history of economic thought from the point of view of what the writers in the past considered to be important problems. We may be sure that if he does, he will find there are swings of intellectual fashion in economic literature in the sense of the Hegelian dialectic. A very simplified outline of such a project will include the contemplative Greeks and their intellectual cousins in Rome who concerned themselves with the problem of value and its relation to ethics. On the other hand, emphasis is found to be upon production in the literature of the Middle Ages. At this time, what was considered important always concerned the production, transportation, and possession of the greatest possible amount of economic goods. The importance given to the problem of usury is no exception. The criticism against payments for the use of money all centered around the "sterility," i.e. the non-productive nature of, consumption loans. More specifically, notice what might be called the "desire for abundance" theory of international trade which so permeated the thought in feudal societies. There is a definite preference here for securing imports and an initial prejudice against exportations of any kind. This theory was applied, first, by prohibiting exports and, second, by seeking to obtain commercial treaties aimed at securing imports. Although the theory of international trade was changed with the opening of the Mediterranean and the consequent increase of municipal wealth, yet the quest for the increase of wealth remained the key notion in economic literature. This continued even in the writings of the mercantilists, physiocrats, and Adam Smith. Yet we find that the

problems involved in distribution and value ever rising in importance until the pendulum swings to an extreme position in the nineteenth century.

The science of economics was encouraged to consider the problems concerning economic development by Smith's explanation of the causes of wealth and Bentham's admirable criticism of Smith's work. Yet economic thought did not develop in this direction. On the contrary, economic development almost disappeared in the literature of the nineteenth century. (Marx is a great exception.) It was replaced by the problem of the distribution of already-existing wealth. To put this in another way: the theory of value replaced the theory of production. The great quest for the greatest possible collection and production of useful objects was replaced by the quest for the maximization of happiness and utility for the greatest number of individuals in society. What is so remarkable about this change in intellectual interest is that the person more responsible for it than any other is Jeremy Bentham. Having reviewed Bentham's criticism of Smith, written in 1787, we can appreciate the truth of the statement that Bentham advanced the theory of economic development further than any scholar until very recent times. Yet, this same Bentham, preaching a deterministic utilitarianism around the turn of the century and later was greatly responsible for the very pronounced swing to value, distribution, and utility considerations, and away from economic development.

There is no better explanation of this turning point in the history of economic thought than that of Thorstein Veblen.¹ Veblen shows that with Smith, value is discussed from the point of view of production; with Bentham and the post-Bentham economists, production is discussed from the point of view of value. "The former makes value an

¹ This paragraph and the quotations in it were taken from Thorstein Veblen, *op. cit.*, 132-5.

outcome of the process of production: the latter make production the outcome of a valuation process.” What is important for our purposes is that Smith and the early Bentham reserve a place for what Veblen calls “achievement of purpose.” The older Bentham replaces this with a hedonistic determinism. Whether concerning ethics or economics, the result is always that “human action is construed in terms of the causal forces of the environment, the human agent being, at the best, taken as a mechanism of commutation.”

Ricardo shows clearly in the preface to his *Principles* that to him the principal problem of political economy is to determine the laws which regulate the distribution of the produce of the earth and all that has been derived from this produce by the united application of labor, machinery, and capital. Even so he includes – and is the last great Classicist to do so – an explanation of economic change. The key factor in the economic process is variation in population. But we must begin, as is always the case, with some type of innovation. Technical progress makes goods more plentiful and so prices are reduced. The real wages of the workers increase because the workers are able to buy their needs at the lower prices. We assume that at the beginning of this process the workers receive a subsistence-level income. But now their standard of living is raised above the subsistence level. Therefore, the workers are now able to bring more children into the world – that is to say the population increases. But with this increase the supply of labor on the market is also increased. The price of wages is consequently lowered and the workers drop back again to the subsistence level.

Granting that the growth of population and technical progress continue, how will these dynamic elements affect the final development of the economy? To answer this,

Ricardo would tell us we must recognize that one factor of production is necessarily fixed. Even though the natural resources that constitute this factor are being progressively exhausted, the income to owners (rent) is progressively increasing. The increase of rent will bring about a subsequent decrease in profit because profits depend on wages and rent. Profit consists of what is left after wages and rent are paid out. Therefore, as the economic process continues, profits tend to a minimum. Finally, the logical outcome is a no-profit economy.

Two things are worth noting in reference to the Ricardian analysis of economic change. First of all, the Ricardian explanation had a great influence on Marx. It formed the basis for the Marxian hypothesis of eventual collapse of the capitalistic system. Secondly, the process described is almost completely automatic – even more so than the Smithian economic process. Technical progress is assumed not explained and consequently there is no place for the entrepreneur whether defined as the coordinator, capitalist, risk-taker, or innovator.

The same is true of Marx. Individuals are given little credit for technical progress whether it be the result of technical innovation, discovery, or revolution. Accomplishments are the response to persistent social needs. To Marx, what little acknowledgement is given to the human element in the capitalistic system is given to the capitalist. However, capitalist is recognized not because of his free creative abilities – nor because he has the talent for directing innovations – but because the capitalist is forced by the nature of the capitalistic system to find successive innovations in order to survive. Capitalism, that system wherein competition is institutionalized, requires that the proportion of mechanical equipment to labor be continuously increased. It is the function of a particular capitalist to see that this

development continues in his firm. Should it cease, the individual capitalist is ruined by his competitors. In time, however, the entire system destroys itself because there is a mathematical limit that eventually must be reached. When this happens the flow of profits is necessarily discontinued and the class of profit-takers, the capitalists, becomes extinct.

Marx desires this technological development to continue. When capitalism has matured in a region and destroys itself because of the cessation of profit, the capitalist disappears. Nevertheless, the work of improvement goes on. The agents for development are the workers and their leaders. The transition to this order is natural and automatic. This is so because as everyone knows, “except perhaps the political economists,” that the capitalist did not perform the labor of superintendence personally in the old order. Furthermore the capitalist was the leader in industry simply because he was the capitalist.

It is not because he is a leader of industry that a man is a capitalist. On the contrary, he is a leader of industry because he is a capitalist. The leadership of industry is an attribute of capital, just as in feudal times the functions of general and judge were attributes of landed property.¹

Consequently, there is no need to be concerned over the lack of leadership when capitalism fails; the duties of leadership are already entrusted to the salaried managers. But what of the technological inventions wherein we find the origin of material improvement? The necessity for inventions such as Arkwright’s, Watt’s, etc., is given due recognition by Marx. However, they can be taken for granted, he says. The inventions will always be present if there are a considerable number of skilled mechanical workers at the disposal of the inventors. We notice here what might well be Smith’s influence. Smith takes improvement for granted if man works toward economic liberty; Marx takes inventions for

¹ Karl Marx, *Capital: A Critique of Political Economy* (New York: Charles H. Kerr, 1906) I, 365.

granted if there is an adequate supply of skilled workers. Both explanations involve that treacherous philosophical problem of causality. Moreover, both are in step with the spirit of modern (anti-rational) psychology and sociology. Man and mankind develop subsequent to bodily and social changes. Man sees because he has an eye; man does not have an eye in order to see. In short, to the Marxists the supply of skilled labor not thought is the determining factor in the advance of human civilization. Says Engels, “In a sense we have to say that labor created man himself.”¹ And Marx, “It is not the consciousness of men that determines their existence, but, on the contrary, their social existence determines their consciousness.”²

The influence of Hegel on Marx is usually exaggerated. Whereas Hegel had a respect for religion, being a product of the Johannine theological thought of southern Germany; Marx was a militant atheist. Hegel was a monarchical absolutist; Marx on the other hand abolished the state, the goal of history is the stateless-Communitistic society. As a philosopher, Hegel was a speculative thinker, philosophy is merely informative; to Marx, philosophy is nothing if it is not practical. Hegel might well call his system philosophical idealism; and Marx, scientific materialism. History to Hegel was “the autobiography of God”; to Marx history was the pursuit of human ends. The two held views diametrically opposite to each other concerning the really significant problems of reality. The Marxian position resulted unmistakably from his early exposure to the thought of eighteenth century French Enlightenment. Yet it is undoubtedly true that Hegel greatly influenced Marx. We mention two instances that are appropriate to our problem of man’s role.

¹ Friedrich Engels, *Dialectics of Nature*, translated by Clemens Dutt (New York: International, 1940) 279.

² Marx, *A Contribution to the Critique of Political Economy* (Chicago: Charles H. Kerr, 1904) 12.

1. From Hegel, Marx acquired a deep appreciation of history – the record of dynamic humanity. This is German and Hegelian not French and Encyclopaedian. History is made by men, says Marx. It is not man's essential function to passively conform to a preordained natural order. However, this does not mean that individuals write history. The greatest achievements of individuals are insignificant. Man acts as a member of his class. History is the record of class struggles - the conflicts between specific groups of individuals who join together because of common interests. The dominant class retains the ownership of the property and possesses personal freedom; the subordinate class has neither. History evolves by revolution. When conditions are believed to be unbearable, leaders arise who change the framework of society. But this leadership is automatic and comes into being when it is needed. If one leader is suppressed, there will be present a substitute to take his place.¹

2. History develops toward freedom. But freedom means something specific to the Marxists. Marx and Engels accept the Hegelian (or more strictly we should say the Spinozan) explanation of freedom. This freedom is not such that it consists essentially in freedom of choice. Free will is denied. The conditions of life determine the character of the volition of the will, the nature of its acts and their results. Freedom must be understood in its relation to necessity and history. It is the appreciation of necessity; it is slavery to history. Freedom does not consist in the dream of independence of natural laws, but in the knowledge of these laws. To understand them is Hegelian; freedom is the self-consciousness of the Absolute Spirit. To make them work toward definite aims is Marxian; freedom then

¹ Cf. M.M. Bober, *Karl Marx's Interpretation of History* (Cambridge: Harvard, 1948) 86-7. Bober gives references to the writings of Marx and Engels where this view is expressed.

is nothing more than consciousness of the real knowledge of the subject. In the words of Engels, “freedom therefore consists in the control over ourselves and over external nature which is founded on knowledge of natural necessity; it is therefore necessarily a product of historical development.”¹

It is quite clear that the entrepreneur in the Marxian system must remain very insignificant.

III

We cannot overlook the original connotation of the French word entrepreneur. In common French parlance it signified an adventurer or enterpriser. The man who seeks adventure may do so by exploring new fields, new directions (i.e. the Innovator); or by consciously exposing himself to unnecessary chances in this changing world (the risk-taker). The word, entrepreneur, became accepted as one of the first technical terms of the new science of economics. But the element of daring or recklessness vanished. It was replaced by the staidness of the rational coordinator, the prudent capitalist. We cannot imagine that the first theorists to use this word as an economic term did so without an appreciation of its conventional meaning. Nor was this the case. Cantillon uses entrepreneur to designate a person who buys at a fixed price and sells in the future at an uncertain price. Risk-bearing is at the core of his definition. A hundred and fifty years later certain theorists revived this original meaning of the term.

In a remarkably clear and scholarly work², Frederick B. Hawley (in 1907) set before American students the results of his sixty years experience as man of science and business.

¹ Engels, “Herr Eugen Dühring's Revolution in Science,” *Handbook of Marxism*, edited by Emile Burns (New York: International Publishers, 1935) 255.

One purpose of this work was to bring to light the activities of the entrepreneur – or enterpriser as he preferred to call him – in the productive process. A keen observer, Hawley saw the four meanings that we have applied to the entrepreneur. Smith did not distinguish the enterpriser from the capitalist and so consequently failed to separate interest from profit. The reason is understandable; “cases were so rare in which the owner of capital did not employ it himself.” Others looked to the enterpriser as the coordinator of land, capital, and labor without furnishing any of them in his own capacity. But Hawley is not satisfied with the term coordinator and cannot find from the literature where it is satisfactorily explained. Hawley would define coordination as the act of establishing purposely new and harmonious relations.¹ He sees that this logically establishes the enterpriser as a planner and so is unsuitable because it is possible that the planner and be entirely remote from the enterprise. A third type is more acceptable to him. The enterpriser is not the planner but might well be the person who takes responsibility for the application of a plan. This approximates the entrepreneur as innovator but differs from it because Hawley speaks exclusively of financial responsibility. Furthermore, he insists that ownership is a necessary characteristic; a person cannot fully accept responsibility for something that belongs to another. In short, Hawley offers the first clear explanation of the entrepreneur as risk-taker. His income is profit, a residue after claims of land, labor, and capital have been paid. The coordinator is a wage-earner, even in his capacity as a planner. “A farm hand who suggests that something be done on the farm and is told to go ahead and do it, earns wages not profit.” The entrepreneur is the person who subjects himself to the

² Frederick B. Hawley, *Enterprise and the Productive Process* (New York: Putnam, 1907). See especially chapter one, 1-16.

¹ We have seen above, however, that the meaning more often involved direction and management.

results of the coordinator's acts; the person at whose risk and for whose benefit coordination is affected..."

The work of Hawley was carried forward by Frank H. Knight in this country and Maurice Dobb in England. The specific function of the entrepreneur remains the risk-bearer, but both terms, entrepreneur and risk, are refined. The facing of uncertainty is reaffirmed as the essential mark of the entrepreneur but the personal role of this man is brought into sharper focus. Both Knight and Dobb conclude that the actual execution of activity "becomes in a real sense a secondary part of life. The primary problem or function is deciding what to do and how to do it."¹ The elements which compose the function of entrepreneurship are one in that they are concerned primarily with deciding things rather than with doing things.²

Various forms of insurance practices have been devised to lessen, or rather, to eliminate risk. This, however, does not remove the need for entrepreneurs. Risk is looked upon by Knight as only a species of uncertainty. In fact it is that species of uncertainty which does not directly concern the entrepreneur. Risk is measurable and may be expressed as a cost. This cost is paid in a manner not unlike all other factors of production. The residual income after all factors are paid is profit, the income of the entrepreneur. So profit does not arise from risk strictly speaking, rather it arises from all of the remaining uncertainties which are non-quantitative and non-measurable.

Professor Hopkins has pointed out in a very interesting way how the concept of profit in the history of American economic thought developed from successive refinements

¹ Frank B. Knight, *Risk, Uncertainty, and Profit* (Boston: Houghton Mifflin, 1921) 268.

² Dobb, *Capitalist Enterprise and Social Progress*, 39.

of Mill's definition.¹ Mill spoke of profit as being composed of interest, wages of management, and the reward for risk-taking. The Walkers – particularly Francis J. – separated profit from interest. After Walker, profit comprised the two remaining payments. Because Walker stressed the importance of the wages of management, he invited the criticism of Hawley and others which resulted in Hawley removing wages entirely from the concept. At this stage, profit is the residual remuneration for risk-bearing. Knight, however, showed that risk is that species of uncertainty that is measurable and so cannot be considered a non-cost (profit) component. Over a period of several decades, American theorizing successively rejected each of the three component parts of Mill's definition of profit leaving no content whatever to it.

We have mentioned a few very brief remarks concerning the risk-taker in the history of economic thought. We hesitate to go into detail – not because the risk-taker is insignificant in the economic process but rather – because we are concerned with his function only is passing. We are interested primarily in the person who brings economic enterprises into existence. Clearly the function of bearing risk, or of exposing oneself to uncertainties of any kind, does not accomplish this. The entrepreneur defined as risk-bearer is the person who willingly places his funds into the position of uncertainty and who in turn is remunerated for his risk if the enterprise is successful. If it is not successful then this entrepreneur bears the loss. His function in the economic process is necessary and important, yet nevertheless it is essentially passive. This is expressed extremely well by

Professor Cole:

¹ William S. Hopkins, "Profit in American Economic Theory," *Review of Economic Studies*, (I, 1933-4) 60-65.

.....the concept of risk-bearing is passive. It gives no suggestion of activity to accomplish something. One might as well say that the function of a railroad is to preserve its rails. But businessmen are typically active, “restless,” ambitious. The bearing of risks is to them merely incidental to the accomplishment of some purpose; and it appears that attention by scholars to the nature of that purpose is likely best to lead them to an understanding of the nature of entrepreneurship.¹

The entrepreneur of von Mises does not fit exclusively into any of the four categories we have proposed.² Because his great treatise was finished so very recently, Mises was able to benefit from all of the wisdom of the recent past. Perhaps as a consequence, the Misesian entrepreneur is a combination of the director, the risk-taker in the Knightian sense, and the innovator. Essentially, however, the Misesian entrepreneur may be identified with that of Knight – as might be expected since the work of Knight and von Mises is so similar in many ways. The term entrepreneur connotes the aspect of uncertainty inherent in every action wherein a man behaves purposefully. Every (purposeful) action “is embedded in the flux of time and therefore involves a speculation.” The success or failure of the entrepreneur dealing with these uncertain conditions of the future depends on the correctness of his anticipation of events. If correct the entrepreneur will be showered with profit. “The only source from which an entrepreneur’s profits stem is his ability to anticipate better than other people the future demand of the consumers.” But the entrepreneur is also the coordinator and director of enterprise. “The specific entrepreneurial function consists in determining the employment of the factors of

¹ Arthur H. Cole, “Entrepreneurship and Entrepreneurial History: The Institutional Setting,” *Change and the Entrepreneur*, 107.

² Ludwig von Mises, *Human Action, A Treatise on Economics* (New Haven: Yale University Press, 1949) especially 61-2, 254-6, and 288-91.

production.” Necessarily involved is a degree of technological ability. But the ability, be it great or small, has no effect on entrepreneurial profit or loss.

As far as his own technological activities contribute to the returns earned and increase his net income, we are confronted with a compensation for work rendered. It is wages paid to the entrepreneur for his labor.¹

The technologically more efficient entrepreneur earns higher wage rates or quasi-wage rates than the less efficient in the same way in which the more efficient worker earns more than the less efficient.....But the specific entrepreneurial profits and losses are not produced by the quantity of physical output. They depend on the adjustment of output to the most urgent wants of the consumers. What produces them is the extent to which entrepreneur has succeeded or failed in anticipating the future – necessarily uncertain – state of the market.²

There is yet another element involved in entrepreneurial activity which has no place in the Misesian framework of economic theory, nor more generally, in praxeology – the study of human (purposeful, exchange) action; but which is persistently observed and must be recognized. Some entrepreneurs are “pacemakers” while others “only imitate the procedures of their more agile fellow citizens.” This type of entrepreneur may be nominated the entrepreneur-promoter. It is the quality of leadership possessed by the promoter that is the driving force of the market, the element tending toward unceasing innovation and improvement. It is the promoters among all entrepreneurs who have more initiative, more venturesomeness, and a quicker eye than the crowd. They are the “pushing and promoting pioneers of economic improvement.”

The Misesian entrepreneur is significant to us for two reasons. First of all, we have been introduced to the entrepreneur as the innovator – or as Mises terms it, the promoter. This will concern us in the fourth and succeeding section of this chapter. Secondly, we

¹ Ibid., 288.

² Ibid., 290.

notice in the Misesian entrepreneur two opposing elements. The entrepreneur as speculator, acting in anticipation of profit, adjusts the complex of production activities so that there will emerge, if there is no interruption by a new change in data, an evenly rotating economy. Of course, this occurs only in the long-run when all profits and losses have disappeared. But all acts, in fact, all short-run effects, are the preliminary stages of this process. On the other hand, we find the leadership qualities of the promoter: initiation, venturesomeness, etc. The entrepreneur as speculator implies an equilibrating tendency; the entrepreneur-promoter appears to be a disrupting element. How these two opposing qualities are to be reconciled we postpone for the present.

IV

The importance of the reaction against Classical theory in Germany is well known. The members of what is conveniently called the Historical School criticized the Classicists for their narrow approach to economic life: an approach, they claimed, that was guided by a crude hedonistic psychology and Cartesian rationalism. Denying the need for pure theory, they offered a methodology which has been described as a trend toward extreme empiricism. Their chief aim was to investigate and describe – not unlike the Institutionalists in America – actually existing economic organizations and institutions both past and present. The result of their work is a rich storehouse of historical and sociological material.

In the beginning these historians did little to uncover man's role in the traditions and forms of economic organization that they described. In time, however, and even in the face of a strong Hegelian influence, certain writers analyzed the activities of the enterprising individual. This is especially true, first of Gustav Schmoller, and later of

Werner Sombart. Both began by evaluating the *Unternehmung* and were led in turn to an appreciation of the *Unternehmer*. What is important to us is that the historical evaluation of the human agent was extremely influential in its insistence that man be treated as he is found actually living and acting in history. The merit of this approach was immediately recognized by Alfred Marshall and there is little doubt that he was influenced in this regard by Historismus. Said Marshall in an early edition of his *Principles*, we must deal with “man as he actually is: not with an abstract or “economic” man; but a man of flesh and blood.” We must deal with a man

.....who is largely influenced by egoistic motives in his business life to a great extent with reference to them; but who is also neither above vanity and recklessness, nor below delight in doing his work well for its own sake, or in sacrificing himself for the good of his family, his neighbors, or his country; a man who is not below the love of a virtuous life for its own sake.¹

It is difficult to deny that important men as they are found in the economic world are men with an enterprising spirit – un esprit entreprenant. More specifically this characteristic involves initiation and innovation. It is the concept of man in this sense that may be traced from the Historical School to Schumpeter. We simply mention below two instances of the development of this concept.

To Schmoller,² the entrepreneur is the person who seizes the initiative. He is also the risk-bearer but this it seems is incidental. An entrepreneur is the key figure (Mittelpunkt) and leader of an enterprise. He is the person responsible for bringing a new organization into being. The enterprise may involve a novel commercial operation, or perhaps it bases its hopes for success on a new type of specialization for manufacturing a commodity. The

¹ Alfred Marshall, *Principles of Economics* (London: MacMillan, 1898) Book I, chapter V, 89.

² Gustav Schmoller, *Grundriss der Allgemeinen Volkswirtschaftslehre* (Leipzig, Duncker and Humblot, 1900) I, 413-4. See also II, 433-4.

outstanding feature is that the entrepreneur brings together specific means of production to carry out a preconceived plan and thus boldly defies a hostile economic community with an immature but vigorous new-undertaking.

According to Sombart,¹ each economic system is a peculiar mode of satisfying material wants which differs from all other systems by possessing its own *Wirtschaftsgesinnung*, *Ordnung*, and *Technic*; that is to say each system is animated by a definite spirit, is regulated according to a definite institutional form, and is developed by application of a definite productive technique. The technique of the capitalistic system may be termed mechanization. But this is unimportant in itself. All of the mechanical innovations of modern times – the steam engine and the railroad locomotive, the coke-process and the Bessemer process, etc., must be brought to one denominator. This denominator is the common spirit from which the whole idea of modern technique originated. The spirit of modern capitalism is the spirit of the individual entrepreneur institutionalized in society. The notes of acquisition, rationality, and competition, which formerly characterized individual businessmen, now dominates the whole of social thought. The laws and customs of society protect and encourage this spirit. The form of the capitalist system therefore is Liberal; there is no regulation except against criminal action and the like. The legal permission of the entrepreneur to act freely within the economy is considered his natural right.

The initiative for economic action lies within the individual enterprise. Each enterprise, however, is guided by a restless and acquisitive activity on the part of the

¹ Cf. Werner Sombart, "Capitalism," *Encyclopaedia of the Social Sciences*, III, 198-206; *The Jews and Modern Capitalism*, translated by M. Epstein (London: T. F. Unwin, 1913); *The Quintessence of Capitalism*, translated by M. Epstein (London: T. F. Unwin, 1915).

entrepreneur. Sombart describes an ideal type of entrepreneur. He means “ideal” in Weber’s sense that the essence of the entrepreneur is brought to expression in full purity and all unessential marks are segregated. This ideal entrepreneur is a combination of innovator and trader. As innovator, he must be an inventor, discoverer, originator, and the like. He must be an inventor of technical innovations and also of new forms of organization for production, transportation, and marketing. He must be a discoverer; he aims to discover new outlets for his products, whether these be new territories or new layers of demand in areas already exploited. He is an organizer; in this capacity he joins together and manages human beings and inanimate objects that he might wrest from them the maximum productivity for which they are capable. The entrepreneur as innovator considers himself to have a mission in life that requires realization; he has a vision which he strives to bring into being.

The explanation is not yet complete. The attributes mentioned above might apply to, say, physical scientists, North Pole explorers, etc.; they are innovators but not entrepreneurs. The entrepreneur must be a trader as well as an innovator. By trader, Sombart means that all of the activities of the man are directed toward the end of doing a profitable business. He appraises all acts and all conditions with a view to their money value. As a trader, the entrepreneur is both calculator and negotiator, that is to say he conducts a lucrative business combining the activities of calculation and negotiation. As a calculator, the entrepreneur attains the ability to translate all separate figures into an integral estimate of the chances of profit and loss. The entrepreneur is a wonderfully shrewd calculator if he masters the art of instantly reducing every phenomenon to a figure in his ledger. As a negotiator, the entrepreneur must be able to carry the transaction

through by means of salesmanship. In the capitalistic system, all transactions are completed without recourse to forceful methods. Restraining from methods of violence distinguishes the capitalistic from the pre-capitalistic entrepreneur. The other party of the transaction must be convinced of the benefit of accepting the proposal.

As capitalism matured the ideal type of entrepreneur disappeared – rather more correctly we should say the ideal type entrepreneur was replaced by three distinct ideal types. They are the entrepreneurs who associated themselves with the labor market, the commodity market, and the capital market respectively. The first is termed the expert, i.e. the entrepreneur who is active in a single branch of production. He is the technical innovator and plant organization is his specialty. He seeks to reap the greatest amount of product at the lowest possible cost. Associated with the commodity market is the businessman. His chief activity is centered in demand creation which is accomplished by effective propaganda or advertising. The last – the entrepreneur whose appropriate milieu is the capital market – is the financier. His activity is directed toward the creation and accumulation of capital by technical manipulation in the stock market. This activity usually takes on the appearance of promotions of new companies, mergers, holding companies, and the like.

Schmoller's explanation of the entrepreneur is more acceptable to us than is the very detailed and involved analysis of Sombart. The work of Sombart is very valuable, however, because more than anyone who preceded him "he saw the businessman as a dynamic factor in economic life and gave that man something of an individuality."¹ It is the blend of Schmoller's innovator and Sombart's reckless and acquisitive enterpriser that

¹ Henrietta M. Larson, *Guide to Business History* (Cambridge: Harvard University Press, 1948) 14.

formed the heritage of true humanism in economics that was accepted and employed to such advantage by Joseph A. Schumpeter. Schumpeter is the great economic synthesizer of our age. He combined three elements: this personalistic aspect of the late Historical School; the Marxian theory of economic development; and the pure theory emanating from Cambridge, Vienna, and Lausanne. We do not think that we overvalue his accomplishment when we say that, fusing these together, he offered the most complete explanation of economic reality thus far. As we proceed it will become quite evident that there are few thoughts indeed in this treatise that cannot be traced back to the wisdom of this man.

CHAPTER THREE

MOTIVATION IN THE HISTORY OF ECONOMIC THOUGHT

The entrepreneur has been explained as manager, owner, risk-taker, and innovator by various students and at various times during the course of the history of economic thought. It is the latter, the changer of economic reality, that concerns us in this work. The economic innovator or entrepreneur is the progressive economic element in the Aristotelian dualism of change and non-change. He is the agent that periodically excites the economic cosmos from its lethargy – that arouses it from its persistent tendency toward repose and ultimate stagnation. The activity of this agent of change is best explained in reference to the several causes. Why he acts concerns us in this chapter.

There is no general methodological reason why the consideration of finality shall precede other causal considerations. However, in the particular case of the entrepreneur, there is good reason to begin here. The maximization of personal net advantage was offered as the unique motive to economic action by the rationalistically inspired Classical economists of the nineteenth century. This is subject to reexamination by the first of the two ways to further the growth of systematic knowledge, viz. “Direct Critique” which involves the investigation of postulates and axioms.¹ The activities of entrepreneurship and the consequent effects which it brings forth, credit, interest, profit, increasing system expenditure, and the rest, require the second method of promoting the growth of systematic knowledge, “Indirect Critique.” This is essentially a synthetic procedure involving new terms and methodological techniques while yet recognizing the necessity of

¹ The two ways were suggested by Prof. Solterer in an unpublished lecture at Georgetown University, 1950.

retaining the old terms. Concerning our task, the observable phenomena of entrepreneurship, profit, etc., cannot be denied; but at the same time they cannot be explained by rationalism alone. The indirect critique needed is supplied in Schumpeter's theory of economic development, furthered by Solterer's refinement of the role of system expenditure, and made evident by the application of the Aristotelian technique. Evidently, the latter is logically subsequent to the reconsideration of the principle of the maximum. Consequently, the application of indirect critique to entrepreneurship which gives rise to the formal and material aspects is reviewed in the chapter that follows this one.

The reader should be pre-warned that a single satisfactory answer to the problem of economic motivation will not arise out of the many pages that follow. Our aim is restricted to first, a demonstration that the maximization principle is in no way a unique or complete answer to the question of economic motivation, and second, to the collection and classification of motives and incentives found in the literature of economics. The former involves the suggestion that we awake to the realization that however valuable and useful be the purely formal theory of our study, it is not always and necessarily a description of observable reality. The latter is a synthesis of opinion on motivation and so by nature is eclectic. Furthermore, no attempt will be made to distinguish motives to creative innovational action from economic action in general. Even in the face of these deficiencies, it is felt that if we are successful, a deeper appreciation of the nature of economic motivation shall result to the extent that we shall have concluded the first of the four tasks set before us by the Aristotelian methodology employed.

I. The Motive of Maximization

By historical logic¹, a case can be made to show that rationalism begot the concept of the maximizing economic man. The man who acts to maximize his net advantage in any commercial transaction must first, mentally or otherwise, account by means of a utility calculus the benefits of the impending transaction. Such an individual is a utilitarian in the sense that he acts to procure his happiness and prevent his displeasure. This is no more than the acceptance and use of the principle that tells us that the practical guide to one's conduct and action is the submission to reason – that superior source of speculative and practical knowledge. In short, the maximizer and the utility calculus arrive from utilitarianism, and utilitarianism from rationalism. We do not say that this must be; only that the maximizer in the economic science came about thusly and that the development is logical enough.

¹ Perhaps there is already in common usage a name for this procedure for no doubt it has been employed extensively by philosophically-minded historians of social thought. At any rate, the term historical logic seems accurate enough. By historical logic is meant simply a useful heuristic device that allows us to reason to the sequence of effects that occur historically from the dominant characteristics of an existing intellectual milieu. The sequence of effects are analogous to deductions in formal logic but this sequence becomes historically and actually real unless suppressed by a younger and stronger intellectual force. No claim is made that this is a valid method of historical investigation unless limited specifically to the current of ideas. It must be stressed that it is used here for brevity sake for certainly it can never be a capable substitute for the full idiographic approach to history.

Frank Ramsey mentioned two kinds of logic. First of all, “formal logic is concerned with nothing but the rule of consistent thought.” Secondly, we may “arrive at or toward truth” by another kind which is designated “human logic.” This involves “useful mental habits for the handling of the material with which we are supplied by our perceptions and by our memory and perhaps in other ways...” It is not our task to explore the nature of logic; surely this is the exclusive domain of the philosopher. On the assumption, however, that Ramsey's classification is at least useful if not valid, it is clear that historical logic is a part of human logic, for the basis or foundation of reasoning here is the a priori principles, e.g. the principle of submission to reason. These, like Keynes' a priori probabilities, are “part of our human outfit ... analogous to our perceptions and our memories rather than to formal logic.” The quotations above are Keynes', found in his biographical sketch of F.P. Ramsey, *Essays in Biography* (London: MacMillan, 1933) 300.

Bentham was the pilot who skillfully guided intellectual history on a part of its journey from the realm of eighteenth century rationalism to that of nineteenth century economic science. There were other pilots, of course. The Physiocrats and Smith were older but no less outstanding ones; they explored the science from a rationalistic base – or to drop the metaphor for accuracy sake, they were able to construct the science because of their rationalistic ideology. Menger, Walras, and Jevons were later ones who quantified the science by employing the very helpful principles of differential calculus. The great, influential Bentham supplied utilitarianism and a felicific arithmetic.

It should not keep us long to include a few remarks on Bentham and utilitarianism.¹ In doing so we have this in mind: the economic man who acts to maximize his net advantage was not originally conceived of as a formal concept as is most common today, i.e. an abstraction quite removed from economic reality itself but useful as an assumption to facilitate economic analysis; but rather it was conceived as a description of rational man acting in the complexities of economic reality. That this was so is clear from Bentham; because it was so, a strong intellectual countermovement propelled by a new psychology reacted against it in the last quarter of the nineteenth century.

Bentham's utilitarianism was by no means the first in philosophy or in economics. Adam Smith's stress on the universal motivation of self-interest is well-known. The passages in which he speaks of this matter are perhaps the most frequently quoted of all to be found in his great book. He speaks of man exerting his force and skill with a view to individual gain; or of employing his capital to his own advantage while society gains more

¹ Jeremy Bentham, *An Introduction to the Principles of Morals and Legislation*, edited by Philip Wheelwright (New York: Doubleday, Doran, 1935) especially chapters I, II, IV, X, and the appendix.

than the individual. But it is Bentham – not Smith or his many utilitarian predecessors who is significant for it was he who refined and popularized the economic maximizer. Bentham’s utilitarianism was first of all clearly defined. Secondly, his attempt to measure utility was indeed heroic. Thirdly, Bentham rivaled Smith himself in influence.

A man acts naturally (or according to his nature) when he acts to promote his own self-interest. This is evident: it cannot be proved nor can the terms be defined. (E.g. “interest is one of those words which, not having any superior genus, cannot in the ordinary way be defined.”)¹ Bentham has us accept this as a first principle, for to question it is to “deal in sounds instead of reason,” etc. We speak of human action as being in conformity to the Law of Nature, Right Reason, or Law of Reason. These phrases express the conformity of an act or the thing in question to a proper standard. The Law of Reason, etc., are looked upon as that positive standard; but, Bentham asks, are they anything more than phrases? On most occasions, it is better to speak of the standard as utility, for this is meaningful to us. By utility is meant, that property of any object whereby the object “tends to produce benefit, advantage, pleasure, good or happiness (all this in the present case comes to the same thing), or (what comes again to the same thing) to prevent the happening of mischief, pain, evil, or unhappiness to the party whose interest is considered.”² The principle of utility is the guide which approves or disapproves of every action according to whether or not it possesses the quality of utility. Benefit, advantage, pleasure, good, and happiness may be spoken of simply as pleasure; mischief, pain, evil, or unhappiness as pain. Mankind is governed, therefore, by the two sovereign masters pain and pleasure. It is

¹ Ibid., 9.

² Ibid., 8.

from them that we determine what we ought to do, and so is derived the first principle of ethics and the standard of right and wrong. It is from them that we point out what we shall do, and so is derived the first principle of human action and the chain of cause and effect.

The first notion of measurement of this utility appears when Bentham asks whether or not an object or activity promotes the interest of an individual. It does this when it adds to the sum total of his pleasures; or diminishes the sum total of his pains. The value of the pleasure or pain is dependent upon four circumstances. In anticipation of a pleasure (or pain) the potential actor should mentally calculate: how intense it will be; how long it will endure; how certain of pleasure will he be; and how long must he wait for it (i.e. its intensity, duration, certainty or uncertainty, and propinquity or remoteness). Bentham adds to this a rational calculation of the probable after effects: its fecundity – will the pleasure generate sensations of the same kind? Its purity – will the pleasure not be followed by sensations of an opposite kind? Finally, Bentham calls good that which is the cause or instrument of pleasure; he calls profit that which is the cause or instrument of distant pleasure. A man experiences enjoyment or takes pleasure when he uses or consumes a good; he economizes when, in an act of exchange, he seeks to maximize the instruments of pleasure, i.e. to maximize profit. Although more details might have been inserted, this is essentially Bentham's utility calculus.

It is somewhat strange that Bentham's immediate disciples did not show much interest in this. Senior, however, selects the utilitarian motivation as one of the four basic assumptions of political economy and a universal characteristic of rational activity. He speaks, however, of wealth rather than good or profit but it comes to the same thing. Every man desires to obtain additional wealth with as little sacrifice as possible. But wealth

compromises “all those things and those things only which are transferrable, are limited in supply, and directly or indirectly productive of pleasure or preventative of pain...”¹ Nor is the desire satiable: every person has some unsatisfied desires which he believes additional wealth would gratify; every man has some unsatisfied desire for money, for being an object of abstract wealth, the desire for money is universal.

Very slowly the economic maximizer rose in importance among the younger unorthodox economists. After Senior who wrote in the thirties, Dupuit and a select group of comparatively unknown pioneers labored to measure utility and introduced in the forties the concept of diminishing utility. Gossen, writing in the fifties, formulated his famous three laws of utility. But the academic world was not ready to assimilate these significant contributions by such obscure scholars. However, in the seventies, this “new economics” of the nineteenth century, being formulated independently in various parts of the Western world – in Vienna, Lausanne, Oxford – grew strong enough to command recognition. The first chapter of quantitative economics had been written. Economics was as last on its way to becoming a strict science. We do not claim to know whether or not this was (what Viner speaks as) the manifestation of the inferiority-complex which practitioners of the social sciences had and have “towards mathematics, toward the exact sciences, and toward the quantification as one of the higher values.”² It is clear, however, that this was made possible by removing all active and spontaneous human action from consideration. The natural sciences had developed a few centuries earlier on the assumption that the natural

¹ Nassau William Senior, *An Outline of the Science of Political Economy* (New York: Farrar and Rinehart, reprint of the 1850 edition) 6, see also 26-8.

² Jacob Viner, “Bentham and J.S. Mill: The Utilitarian Background,” *American Economic Review* (XXXIX, March 1949) 368.

world moves with an exact regularity that implies lawfulness. From this premise a determinate theoretical system could be formed. A rational determinism was supplied to make this possible in economics. Man is presumed to act passively – almost automatically – when confronted with conditions that demand decision, being guided by “the great springs of human action – the feelings of pleasure and pain.”¹ Economic lawfulness as a derivative of rational determinism was as old as the Classical School. New was the quantification of the ultimate laws of economics (Jevons) and the entire economy itself (Walras) based on the general principles of mechanics. Economics, Jevons claimed, becomes closely akin to Statical Mechanics.²

The science of economics continues today to develop on the foundations laid in the mid-nineteenth century. Advances in general equilibrium theory and econometrics have been made possible by the use of mechanical analogues, one of which is the assumption of equilibrium conditions resulting from rationally deterministic economic activity. Modern theorists do not insist, however, that the assumption reflects reality. In fact, with few exceptions, they admit readily that the balance of increments of disutility (work, displeasure) against increments of utility (wealth, profit, pleasure) is simply an axiological and definitive assumption, among others like it, from which logical deductions are spun out – forming in its fullness an economic model that may be applied to reality. If statistical and historical testing shows the model fits actual phenomena well, the model is useful. By no means is this method confined to economics – it is the procedure of modern scientific theory. We are reminded that the non-Euclidean geometry of Riemann was said to have

¹ William S. Jevons, *The Theory of Political Economy* (London: MacMillan, 1879) 304.

² *Ibid.*, 6.

been formulated for the amusement of its creator and as a mathematical fantasy having no real substantiation. Yet Riemannian geometry became an indispensable tool for the physical theory of relativity with very real applications, e.g. the construction of the atomic bomb. No doubt this poses a problem for metaphysicians and epistemologists, but scientists – economists or others – need not suspect – surely not denounce – a method that has been so very fruitful. On the other hand, to mistake what could only be an assumption, to be used as a tool of analysis, for an actual phenomenon is unpardonably bad scholarship. Consequently, it is understandable that strong academic opposition arose against the utilitarian maximizer. The opposition was not directed against the ethics, i.e. the utilitarianism as such – rather against the psychology, i.e. the presumption of universal rational activity. It is indeed paradoxical that the marginal utility economists while accepting the passivity of calculated rational action, fully defined man's freedom of will; the extreme anti-rationalism that followed, while stressing the creativity and active quality of human action, denied free will to man. Quite naturally, the study of economics was greatly influenced by these philosophical changes. But before we seek out the effects, let us trace the highlights of the movement itself.

II. Opposition To Rational Motivation

We state in advance the two general conclusions that are observed as resulting from the whole of the literature relating to economic motivation that appeared around the turn of the twentieth century:

1. The study of economics must begin and end with emphasis upon human activity. Economics is not a science in any sense of the word that implies the establishment of verifiable general laws. This is clearly stated by Veblen who defines economics as the

scientific inquiry into the life-history of civilization with respect to the material means of life. This scientific inquiry of which he speaks involves the investigation of empirical individual conduct and the formulation of theoretical results in terms of this individual conduct.¹

2. Types of individuals may be differentiated by the motives that propel them to act. Some may recognize these motives as rational, but commonly at this time these motives were explained to be instinctive or environmental. In reference to economic motivation, two main subdivisions are apparent: a) the conservative – which includes the conservative leaders very commonly referred to as the capitalists, and the great masses of society; and b) the progressive which involves an agent called by a great variety of names, e.g. the creator, changer, entrepreneur, engineer, innovator, etc.

By way of introduction to the anti-rationalistic influence in the study of economics, we should recognize that the development of one theory of economic motivation took the route from Smith to Marx to Sombart. Smith had presumed the universality of the motive of self-interest and a resultant natural and social harmony. Marx acknowledged the self-interest but considered it acquisitiveness; he rejected the natural harmony and claimed rather social exploitation. Sombart accepted the Marxian explanation but even more than Marx he explicitly restricted institutionalized acquisitiveness to the capitalistic system.

The purpose of economic activity under capitalism is acquisition, and more specifically acquisition in terms of money. The idea of increasing the sum of money on hand is the exact opposite of the idea of earning a livelihood which dominated all precapitalistic systems, particularly the feudal-handicraft economy. In pre-capitalistic systems economics as well as all other thought and action was centered about the human being. Man's interests as producer or as consumer determined the conduct of individuals and of the community,

¹ Veblen, "The Limitations of Marginal Utility," *The Place of Science in Modern Civilization and Other Essays*, 241, 243.

the organization of the economic life of society as a whole and the ordinary routine of business life in its concrete manifestations....All social and individual norms affecting economic processes were grounded in human personal values. On the other hand, in systems dominated by the idea of acquisition the aim of all economic activity is not referred back to the living person.¹

The economic leader, the successful businessman, while very acquisitive also displayed the most talent for struggle – for competition – for adventure. We may imagine him the typical “condottiere” of the Italian Renaissance but placed in a society where his characterizing qualities were even more highly admired. In short, the successful businessman is identified with the spirit of acquisition or avariceness on the one hand, and the desire for adventure or novelty on the other.

Larson credits this study of Sombart as the first analysis of the mind and the psychological nature of the businessman, and thus a milestone in the development of the study of business history.² Max Weber made a study soon after Sombart the thesis of which is similar: the dynamic impulse to economic conquest in the capitalistic system is thrift and parsimony. The studies of Max Scheler confirmed those of Sombart and Weber except that Scheler showed that the capitalistic and bourgeois spirit of acquisition and avariceness is not compatible with the entrepreneurial spirit of adventure and creativity.

The investigations of Scheler spring from those of Weber and Sombart but more in common (strangely enough) with Freud, Veblen, Pareto, Berdyaev, and others. Scheler offers an interaction of diametrically opposed personality characteristics as explanation of changes in economic activity. Certain individuals possess qualities that make for laudable

¹ Sombart, “Capitalism,” *Encyclopaedia of the Social Sciences*, 196-7.

² Larson, *Guide to Business History*, 735.

achievement; another group possesses qualities that resent the former and their accomplishments. They are termed respectively the Seigneurtypus and the Burgertypus.¹ He points out, furthermore, that others before him have conceptualized these distinct personality types.² However, Scheler claims, a conceptual distinction is hardly enough – the two types are contradictory in essence (*Wesensgegensatz*). The distinction is one of biophysical nature. There is somehow a physiological factor – a specific blood mixture – that brings forth the Seigneur type. This type is identified by his love for adventure and his willing acceptance of danger. He is daring, willing to sacrifice, and generous in all things. He values men according to what they are personally and not according to useful performances for society or community. He despises all envious comparisons. He does not feel concern for himself or for his – in fact he takes life quite lightly and is seriously concerned only with whatever affects human personality.³

The second is the Bürgertypus. He possesses a spirit of self-concern and therefore searches for security and guarantees in all things. This in turn motivates him to seek after regularity and calculability in all things. In the place of the love of world and its fullness we find here concern in dealing with an unfriendly world. He is ever making comparisons and promoting competitive situations. In fact, the only value he recognizes is competitive

¹ More generally, the former (superior) type is the Fuehrer who has at least one of five value qualities: he is agreeable, useful, noble, intellectual, or holy – or he has some combination of these qualities. Cf. Scheler's "Vorbilder und Fuehrer," *Schriften aus dem Nachlass* (Berlin: Der Neue Geist, 1933) 160-3.

² For example, Bergson makes the distinction between the *homme ouvert* and the *homme close*; W. Rathenau between the man of courage and the man of fear; W. James between the self-sacrificing and the self inhibited; Sombart between the munificent, squire-like person and the maximizing, bourgeois type. Cf. Scheler's "Der Bourgeois," *Abhandlungen und Aufsätze* (Leipzig: Verlag der Weissen Bücher, 1915) Erster Band, 324.

³ *Ibid.*, 324-5.

success in comparable situations. In this continual striving to prove his worth to himself and to the world he is plagued by the feelings of inferiority which cause him to be resentful, mean and petty in his dealings with men. It is this resentment – or rather “ressentiment” in its full and natural French meaning of enduring psychic disposition of animosity – which is the matrix of opposition to the superior type man and which brings forth the interplay of these two types of human personalities.¹

There are two characteristics of Scheler’s work that are of significance for our purposes here. The first is the emphasis upon human activity as the fundamental factor in economic organization and development. The second is the dualistic, dialectical nature of historical change. The first has a bio-physical base – persons will act differently and for different motives in accord with their biological makeup. This gives rise to the second in this way. There is a clash or opposition, or at best an interplay of these physiologically distinct personality types.

It is interesting to see that while Scheler strongly criticizes Freud and his followers it can be shown that – regardless how they may differ in other respects – the Freudians too give priority to human activity in explaining life and history and to the dialectic in the sense of opposing economic personality types.² The distinction between the *Burgertypus*

¹ A full explanation of Scheler’s “ressentiment” is to be found in “Das Ressentiment im Aufbau der Moralen,” *Vom Umsturz der Werte* (Leipzig: Der Neue Geist, 1919) Erster Band, especially 45-8.

² Freud insisted that the social scientists must focus attention upon individual human action. Social and economic institutions are made by men: it is man’s intentions or incentives which decide whether an institution will be of a specific nature or of a totally different one. Because it is the function of psychoanalysis to examine intentions, there is a very close association between the psychological and the social sciences. The most important psychological (Freudian) foundations of the social studies are the “father-regarding attitude” and its derivative, the “conservative-radical” factor. To be father-regarding or conservative results from – as Flugel expresses it – a predominance of obedience to, admiration of, and identification with, the paternal figure or its substitutes in the external world as interjected in the super-ego. (Cf. J.C. Flugel, *Man, Morals and*

and the *Seigneurtypus* in Scheler and the conservative “capitalist” and radical

Society: A Psychoanalytical Study (London: Duckworth, 1945)). The super-ego is the conscience of the organism and embodies the code of society which the child identifies as its own. In other words, if an individual is code-accepting he is destined to become a conservative in his role in the historical events which he is to encounter. If, however, he rebels against the code, he necessarily becomes a radical in his relations to social and economic institutions. There are certain phenomena in reality which the Freudians explain as symbolic of the father-figure of infancy. The state, or more appropriately the Father-land, is one; Class and God, the latter being the Super-Father, are others.

In the capitalist society, property confers prestige, and being deprived of property is indicative of an inferior position in the community. Therefore, the holder of property, or more particularly the capitalist, becomes a respectable authoritarian “Father-figure.” The capitalist is, of course, conservative: he will fight if necessary to protect established laws, institutions, and traditions of property. But he is a particular type of conservative – one who has become strongly acquisitive and avaricious from early stages of infancy. This develops from certain anxieties that are claimed to result from threats to property. First of all, there is the “oral” fear of going hungry which will lead to great emphasis on the importance of savings and an assured income. Of much greater importance to the Freudian, however, is the second, “anal fear” and “anal eroticism.” The psychoanalyst identifies the personality traits of successful capitalists with what is termed “infantile anal trends.” Circumstances affecting the infant at this time will determine a successful capitalist twenty or thirty years hence. Neo-Freudians explain the foundation of this judgment thus: “Persons with anal trends show a very great amount of aggressiveness. Getting hold of something and keeping it is indeed an affair of the total personality. It increases their pride; it becomes almost part of their own body.” (Paul Schilder, *Goals and Desires of Man* (New York: Columbia, 1942, 39)) and also “Parsimony as an anal-erotic trait can only be understood by taking into account the underlying process of symbolization. The unconscious identifying of feces, gifts, and money influences many later social relations involving money.” (Wm. Healy, Bronner, and Bowers. *The Structure and Meaning of Psychoanalysis As Related to Personality and Behavior* (New York: Knopf, 1930, 322)). That avarice and possessiveness are the chief personality traits of capitalists, and that they are to be found in individuals with strong “anal” tendencies, is an observation from empirical investigation – it is claimed – as well as a conclusion from the theory of psychoanalysis. Still, very few social scientists have given this explanation serious consideration. But this is explained as an attitude of personal resistance. Ernest Jones has spoken of the anal character evoking “the liveliest incredulity, repugnance and opposition.” This is quoted by Healy (*op. cit.*, 318) who continues: “That this should be so merely illustrates the remoteness of the unconscious from the conscious mind, for the truth of the statement itself no one who has undertaken any serious psychoanalytical study can have any doubt.”

The capitalist – protector of the traditions and conventions of society – is in no way compatible with the innovator whether entrepreneur, artist, inventor, or adventurer. The capitalist is the typical “conservative” in society while the innovator is the “radical.” The latter struggles to tear down established custom in society, in art, in technology, etc. The source of motivation for such activity is to be found in repressed anal-eroticism. The Freudian feels his explanation stops here. To explain talent for creativity is psychoanalytically inaccessible. “Psychoanalytic observation does not throw light on the puzzling question of natural gifts for art – either for certain skills, or for creativity in general – and cannot directly contribute to an understanding of the level of performance.” (Ernst Kris, “Approaches to Art,” *Psychoanalysis Today*, edited by Sandor Lorand (New York: International University Press, 1944, 357)).

“entrepreneur” in Freud is enlightening. It is interesting to compare Veblen’s remarks on this matter for Veblen arrived at somewhat similar conclusions while working in this country quite independently of Scheler (and Freud).

It is not surprising that Thorstein Veblen and F.W. Taussig have similar views concerning economic behavior and the motivation for creative activity. Both acquired a knowledge of human action from the eminent American psychologists of their time, William James, John Dewey, Jacques Loeb, and William McDougall. They have in common an emphasis upon behavior rather than anatomy, function rather than structure. McDougall is especially influential. Homan¹ cites the central thesis of McDougall’s work to be: instincts are the prime movers in human activity. The instincts dictate ends. He does not deny intelligence or rationality but this factor enters an act only in choosing the instrumental means to attain the instinctively selected ends. Even at that, rationality has a small role because most often the selection of means involves action that has become habitual. “They operate through the agency of established institutions which are themselves no more than crystallized habits of thought and action.”²

Veblen claimed economic development depends on the nature of these institutions. If the institutions of society are favorable to the ownership of property or to pecuniary relations in general, then economic progress will be resisted. Such institutions obstruct man’s ability to cope with his environment. If, on the other hand, the institutions are conducive to highly developed technological methods – the methods that provide the material means of life – economic progress will be augmented. Such institutions support the

¹ Paul T. Homan, *Contemporary Economic Thought* (New York: Harper, 1928) 418.

² Ibid.

life of mankind in society. This is true because progress depends on the adequacy of certain instinctive proclivities – the most important of which are the “parental bent,” the “instinct of workmanship,” and “the bent to idle curiosity.” The savage state of industrial arts may serve as an illustration. In this period, private property institutions had not as yet been established¹ and so technological knowledge was a collective and common possession. Under such conditions these instinctive proclivities were given full reign and so economic progress was rapid.

Veblen accepts McDougall’s assertion that the ends of life and the purposes to be achieved are assigned to man by instincts. Nevertheless, it is difficult to evaluate the extent of Veblen’s determinism. He makes confusing statements such as “all instinctive action is intelligent to some degree”²; “all instinctive action is intelligent and teleological.”³ Of course this is not to identify the instinct itself with intelligence; rather, in agreement with McDougall, the rational element is involved in the ways and means of accomplishing the ends. Instinct itself, however, is not defined precisely. This is left “for the attention of those whom it may concern” – the psychologists. He speaks of instinct as an innate propensity of human nature.

A genetic inquiry into institutions will address itself to the growth of habits and conventions, as conditioned by the material environment and by the innate and persistent propensities of human nature; and for these propensities, as they take effect in the give and take of cultural growth, no better designation than the time-worn “instinct” is available.⁴

¹ Modern anthropologists are no longer confident that this is factual.

² Veblen, *The Instinct of Workmanship and the State of the Industrial Arts* (New York: MacMillan, 1914) 30.

³ *Ibid.*, 32.

⁴ *Ibid.*, 2-3.

What distinguishes one instinct from another is that each is characterized by a specific purpose, or object to be attained, different from the objective end of any other. The end of the parental bent is the sense of solicitude for the welfare of the group which the individual belongs. This is not to be identified with the Freudian father-regarding attitude although there is a kinship in designation. Rather they are diametrically opposed so that paternal bent may be closely associated with the contrary of the father-regarding attitude, viz., the projection of the super-ego upon the social group. The end of the instinct of workmanship is not a terminal one (Veblen uses “ultimate”). It has to do with proximate ends while the terminal ends are supplied by the other instincts. It is the urge to accomplish a given end “with practical expedients, ways and means, devices and contrivances of efficiency and economy, proficiency, creative work and technological mastery of facts.”¹ It is not the means, however, for it is an object of attention, desire, and sentiment in its own right. “Efficient use of the means at hand and adequate management of the resources available for the progress of life is itself an end of endeavor and accomplishment of this kind is a source of gratification.”² It is a proclivity for taking pains; a taste for effective work and a distaste for futile effort. In short, the functional content of the instinct of workmanship is the desire to serve the ends of life effectively. The third instinct to be mentioned is the bent of idle curiosity. It is “idle” in the sense that it comes into being only when accompanied by large quantities of surplus energy. Only when elemental needs have been satisfied does it become active for no utilitarian aims are involved. This bent is the more or less insistent urge to know things – to discover the sequence of activities going on in the observed

¹ Ibid., 33.

² Ibid., 31-2.

phenomenon. It is the source of all science and cultural achievement. It may actually detract from the welfare of the community in the period in which it is active for it involves a sacrifice; an intellectual investment for benefits accruable in the future.

The welfare of society will be great according to the willingness of that society to recognize the value of these “generically human” instincts that forward mankind’s material interest. In opposition to them, there persists in human nature a trait that hampers cultural and economic progress. An excessive and unwarranted respect for tradition, plus the readiness to attribute effects to magical causes, contaminates the generically human instincts. Institutions, that arise reflecting this trait and involving superstitions, taboos, magic, etc., dampen the urges to 1) forward the ends of the group; 2) discover more efficient techniques; and 3) devise a systemized body of knowledge.

We have found in Veblen a conservative-radical factor very similar to that of Freud. Perhaps we should term it a progressive-traditional factor but it would be difficult to deny the close similarity. The instinctive base is present in both; we even find specific types of individuals who seek to conserve or change in conformity to their dominant personality traits. The businessman and engineer are as psychologically distinct in Veblen as the capitalist and innovator in Freud. The “engineer” is the agent who brings about technological progress for he possesses the most highly developed instinct of workmanship. Of course, the term engineer comprises industrial experts, chemists, mineralogists, and technicians and engineers of all kinds. They are the inventors (“at least in the loose sense of the word”),

the designers and builders of factory, mill, and mine equipment, of engines, processes, machines, and machine tools, as well as shop managers, at the

same time that they (take) care, more or less effectually, of the financial end, etc., of industry.¹

We find the businessman, the capitalist, the entrepreneur, in contradistinction to the engineer. We would prefer to differentiate capitalist and entrepreneur, associating the latter term with change, innovation, and economic progress, but Veblen designates entrepreneur as corporation financier. He is a businessman but the term carries with it “the vague suggestion of big business rather than small.”

The businessman, like all men have some instinct of workmanship. Furthermore, if the businessman is a great man he is likely to have a parental bent – to have ideals and aspirations to make life easier for his fellows. But the possession of such qualities will not add to success in business affairs. In fact, they will detract from business efficiency. This is true because Veblen assumes that the most successful of business operations in any industry necessarily involve activities detrimental to society. Thus, businessmen who are so sensitive morally will not prefer, for example, to distill whiskey, to use shoddy rather than wool, etc.; will prefer to avoid wrecks on their railways, etc., etc., even though there be a pecuniary disadvantage in choosing these humane courses. Consequently, because the industrial system is organized on business principles and for pecuniary ends, economic progress in society will be accomplished only as rapidly as business interests will permit. The role of the businessman is a restraining one – or at best a negative one. If he be an extremely grasping and acquisitive individual, industrial progress will be greatly retarded. On the other hand, should he, almost unselfishly, reject the maximum pecuniary remuneration possible to him, then industrial progress may step along more rapidly. Industry is carried for the sake of business not conversely. So the retardation as well as the

¹ Veblen, *The Engineers and the Price System* (New York: Viking, 1933) 32.

advance is to be set down to the account of the businessman because he holds the discretion and exercises it fully.¹

Another contemporary, Vilfredo Pareto², offered an explanation of economic motivation that is very similar (in its general framework not in detail) to the explanations of Freud and Veblen. The main factors that determine social equilibrium, Pareto claimed, are sentiments and instincts. These are six classes of “residues” or manifestations of these sentiments and instincts. (Residues are analogous to the mercury in a thermometer which is a manifestation of the rise in temperature). In innovators we are apt to find great residues of one of these classes, “the instinct for combinations.” This instinct “impels the human being to put things and acts together without pre-established design, without knowing exactly what he is driving at.” It involves all of those talents which we speak of as ingeniousness, inventive faculty, originality, imagination, and so on.³ This instinct is the progressive element in human society and so business leaders are rich in its residues. It is not always completely devoid of rational design, but often design has nothing to do with the result actually achieved. More often, rationality enters with the “hunger for logical developments.” What people want is to think – it matters little whether the thinking is sound or fallacious. The residue of this “hunger” explains the need people feel for covering their non-logical conduct with a varnish of logic. Furthermore, in addition to this rationality of ex post activities, there may also be a rational element involved in the means

¹ Veblen, *The Theory of Business Enterprise* (New York: Scribner, 1932) 26, 41-5.

² Vilfredo Pareto, *The Mind and Society*, four volumes, edited by Arthur Livingston (London: Jonathan Cape, 1935) II, 524, section 899.

³ The Italian combinazione infers those extensions of meaning much more readily than does the English combination.

of accomplishing the instinctively selected end. Surprisingly, this is identically the thesis of McDougall and his American colleagues, viz., the motives are instinctive (Pareto says non-logical) but the techniques may be severely logical. Unlike innovators, artists, business leaders, etc., the great mass of businessmen are weak in residues of the instinct for combination. This is as it must be if social equilibrium is not to be completely disrupted. The rank and file of businessmen are found to possess strong group-persistences – “persistenza degli aggregati” – a second classification of residues. This is the instinct to consolidate groups of mental sensations and perpetuate them into traditions and institutions – into units persisting in time. It is the conservative and balancing factor in Pareto and is basic (as is also true of Freud and Veblen) to his (their) whole conception of history.¹

It seems fair to say that the efforts of Freud, Veblen, and Pareto are a representative cross-section of the movement of reaction against rationalism in the academic world and against the motive of maximization in economics. Its influence – including also the influence of other anti-rationalistic forces, e.g. the social philosophy derived from Darwinism – was felt even within the stronghold of the Classical tradition itself. Alfred Marshall – ever loyal to his intellectual forefathers – apologized for the British habit of leaving “much to be supplied by the common sense of the reader.” In the case of the maximizing motive he readily admits “reticence has been carried too far, and has led to frequent misunderstanding at home as well as abroad.”² However, it would be difficult to argue away the strain of utilitarianism in Bentham, James Mill, Ricardo, Senior, Jevons,

¹ Vilfredo Pareto, *op. cit.*, chapters VI and XII.

² Marshall, *Principles*, 783.

and many of the less-important writers. In fact, the best Marshall could do to defend John Stuart Mill was to quote Mill's confusing statement: "There is perhaps, no action of a man's life in which he is neither under the immediate nor under the remote influence of any impulse but the mere desire of wealth."¹

Marshall himself rejects the idea that the pursuit of wealth or pleasure supplies the motives to all economic activity. He speaks of the typical proprietor of a small business who often times works harder than ordinary workmen and for a lower net income; the freedom and dignity of his position are very attractive to him. Furthermore, "the best energies of the ablest inventors and organizers of improved methods and appliances are stimulated by a noble emulation more than by any love of wealth for its own sake."² Still, Marshall insists that desire for pay which is the material reward of work is the steadiest motive to ordinary business life. It is not necessarily the desire for money that he insists on retaining; it is the desire for pay – the pay being a measure of the force of motive. It is possible to conceive of a society where

public honours are meted out by graduated tables as rewards for every action that is done for others' good. If these honours can be transferred from one to another without the intervention of any external authority they may serve to measure the strength of motives just as conveniently and exactly as money does with us. In such a world there may be a treatise on economic theory very similar to the present, even though there be little mention in it of material things, and no mention at all of money.³

It was important to Marshall to retain at least this much of the hedonist calculus for it is on the basis of this that economics has become "more exact than any other branch of the social

¹ Ibid., cf. also 765 and the note on 17.

² Ibid., 14.

³ Ibid., 782.

science.” Unlike the other branches, it has a motive that can be predicted; a command over material wealth (say money) that is definite and transferrable; and quantities that can be counted and recorded. It is here that we find the first real evidence that the abstract motive of utility is little more than a tool of analysis. While Marshall tried invariably to identify his premises and assumptions with real phenomena, the utility calculus is admittedly a poor reflection – at best a partial, distorted description – of economic motivation. Yet it is a necessary assumption if economics is to have a scientific basis.

After Marshall most orthodox theorists came to recognize the hedonistic premise as a necessary but completely instrumental part of economic analysis. There is perhaps no better illustration than F.W. Taussig who defends and employs the hedonistic premise yet offers an explanation of actual motivation very similar to McDougall and Veblen. Taussig claims that the surest way to reach precise conclusions regarding economic phenomena is to assume

once and for all that men will procure anything and everything as cheaply as they can; that they will never deviate from the barest and simplest self-regarding behavior. Apply the hedonist calculus to the bitter end, and you can reach conclusions susceptible of formulation with the precision deemed most severely scientific. The crowning example of this procedure is in the application of mathematics to economic reasoning. The most elaborate and intricate results are “proved” by the mathematical method, on the assumption throughout that men will obey the narrower self-regarding motives as surely and unerringly as matter obeys the law of gravitation. By this procedure, and by this alone can economists build up an accurate, logical, self-consistent body of doctrines.¹

In another place, Taussig despairs of finding the solution of any problem such as the effect of tariff protection on national welfare without deductive reasoning from the utility premise; even though “the statistical and historical material is here as complete as it could

¹ F.W. Taussig, *Inventors and Money Makers* (New York: MacMillan, 1915) 109-10.

possibly be made.”¹ However, significant economic activity does not depend on the prospect of gain – at least not to any great extent. Rather the motivation is the intrinsic satisfaction from the exercise of inborn impulse – or instinct, dispositions, innate tendencies. It involves one of the kinds of automatic conduct: it may be the instinct of contrivance, or the instinct of emulation, etc. The first of the instincts (“which are direct and obvious springs of industrial activity”) is McDougall’s contrivance (Veblen’s workmanship). It is inborn and where highly developed an irresistible impulse. Schemes and experiments, like the flow of melodies from a Schubert, are spontaneous. They begin in childhood and persist as long as life and strength hold. By way of illustration a part of the list of Cartwright’s contrivances show improvement in the following: in the manufacture of bread, biscuits, bricks, steamships, ploughs, carriages, steam engines; in the fireproofing of houses; in using chemistry in agriculture; in raising potatoes; making ropes, calendering linens; cutting velvet pile; pumping up water; Cartwright even devised a theory of the planetary system.² Such a list (others could be made for da Vinci, Edison, Watt, etc.) indicates to Taussig the restless and capricious character of contrivers. Economic progress depends entirely on this talent. But it requires also the steadying hand of the businessman to curb impatience and to supply judgment. Unlike the conservative-radical factor in Freud and Veblen, the progressive instinct of contrivance and the conservative instinct of acquisition are not incompatible. The latter is the urge as well as the talent for collecting and gathering. In the case of the biologist, specimens are collected, but to the businessman it is profit and material wealth. Economic innovations are perfected and developed when the contriver is

¹ Taussig, *Some Aspects of the Tariff Question* (Cambridge: Harvard University Press, 1915) 156.

² Taussig, *Inventors and Money Makers*, 25-6.

allied with the businessman. It should be stressed finally that it is the inborn urges – the instincts or talents – that are significant in bringing success to the individuals and increased welfare to the nation. It is not desires or intentions. Edison surely did not lack the pecuniary motive but he did lack pecuniary ability which is the reflection of a highly developed instinct of acquisition. In short, rational motivation is given a very subordinate role in historical development. This was as true to Taussig as it was to Freud and Veblen.

We have found two distinct explanations of the motivation to economic activity. The first, in the Classical tradition, has a utilitarian basis at least to the extent that men act when they act normally and naturally, only after calculating the maximum of satisfaction. This motive is hedonistic, rational, and calculable. The second, anti-rationalistic explanation that appeared independently, yet almost simultaneously in Vienna, Cambridge, and Lausanne shortly before the turn of the twentieth century, claimed instincts or impulse as the selector of economic ends. This motive is spontaneous, instinctive, and automatic. The first is no longer defended as a generally description of human behavior, it is however an invaluable tool of analysis. The second is held in its entirety only by biological determinists.

III. A Classification of Motives

It might be helpful at this time to differentiate the ends of economic activity into a) the subjective motive whether it be considered to be instinctive or rational, and b) the objective motive forced on the individual by the specific institutional elements involved. The first concerns the incentives or intentions of the agent – it is the end which the agent has in view when acting. The latter concerns the act for whose sake the action is done – it may have nothing at all to do with incentives or intentions. It is the end which the operation

(work or action) naturally tends to produce or to obtain. Some examples may help to clarify the distinction. The natural (objective) end of the hundred yard dash is victory. The motive to participate in the race may be this, i.e. the desire to win, or it may be any of a long list of intentions – the prestige resulting, health from the exercise, “honor for the team,” the prize, etc., etc. A second example points in a game of cards are analogous to profits in the game of business. Both are important, in fact necessary if the player is to be successful. They are necessary because of the rules of the game. However, all players at all times do not play for the points – or to extend the analogy, profit is not always the compelling motive of the businessman. Rather the participants may play for the thrill of winning, to amuse themselves, for the desire to compete, etc., etc. R.A. Gordon, who recognizes the creative urge as an important incentive to business ac, also sees clearly the significant objective role of profit motivation.

Primarily the creative urge in business takes the form of seeking to develop a successful business enterprise. Success in business is measured by solvency and profits. The most important criterion of “Creativeness” in the business world, the primary yardstick by which the business leader measures the effectiveness of his work, is the size of his firm’s earnings.¹

An examination of the objective or institutional end of economic activity would entail a study of the institutional structure of historical economic system. We are interested, however, in knowing more concerning the incentives and intentions of the businessman. Consequently, a survey and classification of economic literature as it touches upon subjective motivation is offered below:

¹ Robert A. Gordon, *Business Leadership in the Large Corporation* (Washington: Brookings Institution, 1945) 308.

I. The urge to create.¹ The incentive sometimes called the urge to create is as persistent in contemporary literature as maximization of net advantage was in the literature of a hundred years ago. Furthermore, there are many biographical examples to show the actual presence of this motive, but there are few definitions or explanations of its nature. But the examples are useful for they describe what is not satisfactorily explained. The activities of Edmund Cartwright mentioned above serve as an adequate illustration. Perhaps those of Gail Borden are even more enlightening.²

Strangely enough the creative ability of Gail Borden became evident only in the later years of his life. When Borden was forty-eight (1849) years old, he began to work seriously on his “meat biscuit,” a dehydrated meat compounded with flour that would keep indefinitely. His attempts to create a demand for his product were completely unsuccessful. At fifty-two, he began experimenting on milk condensation. He applied for a patent but the Patent Office refused his application on the grounds that it was not superior to simple boiled milk. His efforts to market this product were unsuccessful for nine years – then in

¹ This classification of motives that follows was made for the most part from: Chester I. Barnard, *Organization and Management* (Cambridge: Harvard, 1948) chapter 1; Barnard, P.D. Bradley, A.H. Cole, R.E. Du Wors, Gordon, L.H. Jenks, Redlich, Schumpeter, G.A. Smith, and David McC. Wright, articles in *Change and the Entrepreneur*; Gras, *Business and Capitalism, An Introduction to Business History* (New York: Crofts, 1947) introduction; Paul Douglas, “The Reality of Non-commercial Incentives in Economic Life,” *Trend of Economics*, edited by R.G. Tugwell (New York: Crofts, 1930) chapter 5; Gordon, *Business Leadership in the Large Corporation*, chapters 12 and 13; Keynes, *General Theory*, chapter 12; Talcott Parsons, *Essays in Sociological Theory*, chapter 12 (Glencoe: Free Press, 1949) 201-9; Schumpeter, *Economic Development*, chapter 2; Jacob Strieder, “Origin and Evolution of Early European Capitalism,” *Journal of Economic and Business History* (II, November 1929) 1-19; Taussig, *Inventors and Money Makers*, chapters 3 and 4; William I. Thomas and Florian Znaniecki, *The Polish Peasant in Europe and America*, two volumes (New York: Knopf, 1927) I, introduction; Adolph Wagner, *Grundlegung der politischen Ökonomie*, 2 Bde (Leipzig: C.F. Winter, 1892) B 1, K 1; David McC. Wright, *Democracy and Progress*, chapters 3 and 5.

² The notes on the life of Borden that follow are taken from Joe B. Frantz’ article, “Gail Borden as a Business Man,” *Bulletin of the Business History Society*, XXII, December 1948, 123-33.

1861, with the help of a partner and an Army contract, the Borden dairy enterprises began to come to life. The demobilized Union soldiers spoke highly of Borden's condensed milk when they returned to their homes and soon the great problem of the new industry was meeting the demand. Borden took more than a personal interest in his factory – we find such notes in his pocket memorandum-book as “wash cellar windows,” fix gate chains.” Even so, Borden, in typical entrepreneurial fashion, could not permit himself to become completely submerged in meeting a demand – his function was always the creation of demand. So at this time when the plant could not meet half the orders, Borden began to write such statements as, “Next season I expect to.....manufacture.....extract coffee combined with milk, condensed cider or apple jelly, meat biscuit, pemican, and.....extract of beef.” Borden speaks very often of his motives but they are never the same. Once he speaks of an ambition to be worthy of princes; again to make milk on shipboard as common as sugar; again to give the name Gail Borden international significance as a symbol for service. From the few biographical notes inserted here but also from Frantz' more complete investigations we are led to suspect that Borden did not know his real motives. It is possible that Borden like so many other great innovators possessed an ever-abiding, yet subconscious will to create.

This drive, or desire, instinct, joy, urge, lust, whatever it might be – or whatever it be called – is recognized by a very large number of respected scholars to be all important to creative economic activity. Strieder describes it as well as any of his fellows. Speaking of the businessman of the Renaissance and attempting to answer the question, what were the motives that drive such men to a more intense pursuit of gain? he remarks:

It was something at work in the background, often behind the threshold of consciousness – the need that the strong personality felt for activity, the

restless mysterious lust to create that drives its bearer to activity in the sphere in which he is placed.¹

As we have already seen several writers speak of it as an instinct: McDougall and Taussig, the instinct of contrivance; Veblen, workmanship; Pareto, the instinct for combinations. Keynes tells us of a spontaneous optimism that always coexists with enterprise, i.e. long-run economic activity. He contrasts it with rational or mathematical expectation which does not motivate positive activities, e.g. would the South Pole have been explored if the expedition depended on an exact calculation of benefits to come? Individual initiative requires reasonable calculation, of course, but it must be supplemented and supported by “animal spirits” which involve a spontaneous “urge to action.”

.....It is our innate urge to activity which makes the wheels go round, our rational selves choosing between the alternatives as best we are able, calculating where we can, but often falling back for our motive on whim or sentiment or chance.²

Some writers place the motive in the act itself (*finis operantis*), while others place it in the accomplishment of the act (*finis operis*). For example, Adolph Wagner many years ago (1885) spoke of the simple craving of occupation and the pleasure of activity. Much more recently (1945) Gordon mentioned the pure urge to construct, invent, and create for its own sake alone. Closely allied to this is William I. Thomas' urge for adventure; the desire for new experiences, for fresh stimulation. On the other hand, Gras and George Albert Smith find the motive in the accomplishment of the act. “There is a desire for accomplishment, a desire to be at the head of something and to make it work. Quite surely

¹ Strieder, op. cit., 4. The line to denote emphasis under “lust to create” has been added.

² Keynes, *General Theory*, 163.

a desire for accomplishment ranks high among motivations.”¹ Gras is more specific the motive is the satisfaction in successfully meeting administrative challenges and fashioning enterprises of one’s own design. Of course this is not limited to businessmen for the

creative business man, artist, scholar, and philosopher are fashioned from the same clay: finally, they perish and the work of their hands crumble, but their influence becomes human heritage.²

This urge to create is recognized by Schumpeter. He notices that typical entrepreneurs retire from the arena of economic activity, “only when and because their strength is spent and they feel no longer equal to their task.” Hedonistically, such conduct must be considered irrational because leisure is necessary to “consume” the material rewards gained. Such “irrational” behavior may be explained in many instances at least by the presence of a persistent motive that may be described as the “joy of creating,” of getting things done, or simply of exercising one’s energy and ingenuity.³

II. Maximization of personal advantage. Most of the recent literature concerning the motive to maximize personal advantage either denies its omnipresence or in some way restricts its significance. Some writers claim it to be an exclusive characteristic of the capitalistic system and hundreds of instances are available to confirm its absence in other systems. For example, Bradley tells of a very interesting case in South America:

.....while it may be more profitable to raise wheat rather than cattle on some of the large Argentine ranches, many owners of such haciendas prefer cattle raising because it relieves them of the necessity of maintaining tenants, and retains, unimpaired, the spacious, almost feudal outlines of their domains.⁴

¹ George A. Smith, “The Approach to Business Policy in the Harvard Graduate School of Business Administration,” *Change and the Entrepreneur*, 16.

² Gras, *Business and Capitalism*, xi.

³ Schumpeter, *Economic Development*, 92-3.

Also, within the capitalistic system, evidence is given to show that various other motives (the desire to play the game for its own sake, the flair for developing new things, etc., etc.) are at least equally important. It is interesting to note that Gras does not feel that the intensity of the profit motive has any effect on the success of enterprise. In fact, men “are not good administrators because they seek profits, but they earn profits because they are good administrators.”¹ Of course, much of all this is a part of the reaction against the extreme position of the nineteenth century. Surely, it cannot be denied that the striving for one’s own personal advantage will always take its place in any complex list of significant economic motives. As Parsons expresses it, man can usually be trusted “to prefer a higher financial return to a lower, a smaller financial loss to a greater.”² In this sense, we can say that man normally acts to maximize his self-interest.

III. Negative economic motivation. The motivation to maximize net advantage or personal self-interest calls forth rational and calculated activity that is necessarily less spontaneous and less active than the impulsive or emotional drives mentioned earlier. Closely allied to this are motives involving fear. This group might be termed negative economic motivation. The most common is the fear of the future which is perhaps more often referred to as the desire for security. Thomas speaks somewhat harshly of this desire “exemplified by the wretchedness of the individual in perpetual solitude or under social taboo.”³ Another common motive to economic activity is the fear of public disapproval.

⁴ Bradley, op. cit., 41.

¹ Gras, *Business and Capitalism*, xi.

² Parsons, op. cit., 201.

³ Thomas and Znaniecki, op. cit., 73.

The activity called forth from this motive – like that of all the motives cited in this section and the preceding – is usually passive. There are minor exceptions of course. Public disapproval is sometimes an incentive to innovations that involve safety contrivances or public conveniences. It is found in industries that have become established. “Our railroads are now very largely equipped with elaborate signaling systems to safeguard against accidents and wrecks. These systems were installed not in response to any desire to cut losses but as a result of public pressure for innovation.”¹ The fear of failure, in a personal sense, is always a powerful incentive to human action. Carried over into the business world, this is the frequently observed desire to keep the business venture going. Expressed negatively again, this is the fear of bankruptcy or fear of loss that has become increasingly prevalent in recent years; so much so that at least one specialist in business organization has referred to it as “the dominating economic motive in the conduct of doing business.”

Though the hope of profit is the mainspring of industrial enterprise and therefore of industrial employment, it is not the dominating economic motive in the conduct of doing business. Fear of loss, not profit, dominates the business complex. This fear is not peculiar to businesses organized for profit, but inheres equally in enterprises of nonprofit character, such as hospitals, philanthropic foundations, government departments, etc. As a practical force affecting personal relations in all kinds of employment, industrial or otherwise, I should think effort to prevent loss is many times as important as the effort to secure profit. If this is true, it is exceedingly important to recognize it, because it is easily demonstrated that all interests coincide on the question of losses. Men cannot even be employed, if outgo exceeds income.²

IV. The will to power. Thomas describes the will to power (or the desire for mastery) with his usual severity. It is “exemplified by ownership, domestic tyranny, political despotism;” it is “based on the instinct of hate;” it is, however, “capable of being

¹ Chester I. Barnard, “The Entrepreneur and Formal Organization,” *Change and the Entrepreneur*, 9.

² Barnard, *Organization and Management*, 16.

sublimated to laudable ambition.”¹ In modern times the sensation of power is most apt to be experienced by means of control of business enterprise.

The management has an interest in the business different from that of any investor. That interest is the management status which is significant in terms of control. Control is all-important. It means salaries and prestige. It means power to dispense normal business patronage to affiliated interests. It has been likened to a feudal tenure with rich incidents accruing to it.²

This is also observed by Schumpeter who identified this motive with the dream and will to found a private kingdom. “The modern world really does not know any such positions, but what may be attained by industrial or commercial success is still the nearest approach to medieval lordship possible to modern man.”³ In some instances, the motive is to be found in the actual struggle for power and conquest rather than in the attainment of a position of power. Schumpeter calls this the will to conquer: it is “the impulse to fight, to prove oneself superior to others, to succeed for the sake, not of the fruits of success, but of success itself. From this aspect, economic action becomes akin to sport – there are financial races, or rather boxing matches.” The financial result or the position of power is mainly valued as “an index of success and as a symptom of victory.”⁴

V. The striving for recognition. Parsons describes this motive to economic activity as the desire “to be the object of moral respect on the part of others whose opinions are valued,” the desire to be “approved of, admired, or even envied.”⁵ There are many sources:

¹ Thomas and Znaniecki, op. cit., 73.

² Quoted by Gordon, *Business Leadership in the Large Corporation*, 306, from a SEC Report on Protective and Reorganization Committees.

³ Schumpeter, *Economic Development*, 93.

⁴ Ibid.

⁵ Parsons, op. cit., 208.

it may be the desire to be esteemed by one's fellows in the same field of activity; or in the same group; it may be the desire for esteem and approval of the general public. It is Douglas' "craving for notoriety" or love of publicity; the desire for glory, prestige, honor, etc; or less critically, it is the satisfaction experienced from social appreciation. Du Wors infers from his observations in the industrial sectors of Eastern Maine that the young men between the ages of twenty and forty are urged forward by a dominant drive to make money. After forty, however, a hunger for honors develops and becomes dominant. This is the period in the life-cycle of man when the service motif – which is egoistic rather than altruistic – is verbalized and acted upon.¹ It is of some importance to recognize that striving for recognition may be a strong inducement to innovation. Entrepreneurial success means the enhanced status of the individual inducing the change, and so economic development may be more easily accomplished – assuming that talent is present – because of it.

VI. Altruistic motivation. The final category to be mentioned is Wagner's "unegoistic" or altruistic motive. Before it is described, it seems necessary to acknowledge the pioneering work of Adolph Wagner in this field. He was the first to give a full and systemized account of economic motivation. But more significant is the fact that his classification still remains – although it is infrequently referred to – one of the best in the economic and psychological literature. We are happy to admit that of the six categories that were the result of the synthesis attempted in this chapter – which unfortunately was begun without the guidance of Wagner's work, five coincide more or less with Wagner's classification. Only the will to power is not included by Wagner. A first division is made to

¹ Du Wors, "The Entrepreneurs of Eastern Maine," *Change and the Entrepreneur*, 54-5.

distinguish the egoistic from the altruistic. There are four subdivisions to the first; they are the first four motives mentioned below. The five motives as Wagner listed them are:

1. Streben nach dem eigenen wirtschaftlichen Vortheil – our maximization of net advantage;
2. Furcht vor Strafe – which may rightly be included as a part of our Negative Economic Motivation;
3. Geltungsstreben – our desire for recognition;
4. Freude am Thatigsein – this is associated with the urge to create;
5. Unegoistisches Leitmotiv.¹

The latter is described by Wagner as an impelling force to act morally. It is the impulse in man to do his duty, lest his conscience deprive him of his peace of mind in the future. In its pure form this motive appears as the “categorical imperative” to act which man obeys because a command within his soul asserts that it is morally correct to do so. This motive – minus the terminology and implications of Kantian ethics – is the same one that modern writers refer to when they speak of the unselfish devotion to an enterprise, the desire to benefit humanity, and the willingness to act purely for the service of the community.

Miscellaneous motives. There are several other motives that are related to but not completely identical with the six mentioned above. For example, it has been observed that economic activity – even innovation – has been motivated by faith in a specific social philosophy. The socio-industrial experiments of Robert Owen and the Utopian socialists are obvious instances. No doubt, philanthropy also has been the source of economic activity. Both of these are closely related to the altruistic motive. Philanthropy, however, is

¹ Wagner, *Grundlegung*, I, 87.

at least sometimes more closely associated with the desire for recognition. It is possible that vanity – also related to the drive for recognition – may be the source of activity. Finally, what Professor Douglas describes as the desire to project one’s own personality into the work at hand is somewhat similar to the urge to create. It may be possible to find still other motives to economic activity, but we may feel confident that all of the significant ones are included in our list.

IV. Conclusions

Professor Cole believes that “the convenient working hypothesis of the deductive economists – ‘maximization of profits for the entrepreneur’ – must be discarded, at least as a realistic tool.”¹ But perhaps he is overstressing the realism so necessarily characteristic of historians. Most contemporary economic theorists continue to defend the need for assuming some form of maximizing procedure. This is necessary if the study of economics is to be recognized as a science, that is to say, as a systemized body of measurable knowledge. A determinate system is required and this is made possible if rational determinism is assumed. Confusion arises only when the rational maximizer is mistaken for a simplified description of a real phenomenon. To use the terminology of Max Weber it is not an ideal type but rather (an almost purely formal) catallactic concept that is essentially functional, not historical. No doubt, it is partially descriptive of reality, otherwise it would be a useless assumption. But at best it is only a part of the real motivation to economic activity. Father Divine emphasized this when he said recently:

In using the assumption of rational conduct the economist is merely focusing attention upon, and isolating for scientific study, a particular aspect of

¹ Cole, “Entrepreneurship and Entrepreneurial History: The Institutional Setting,” *Change and the Entrepreneur*, 96.

human conduct, i.e. the administration of scarce resources with a view to obtaining the maximum satisfaction of wants.¹

There are few indeed who continue to claim any such utilitarian motivation as an adequate explanation of real human action. Von Mises, however, is one that does. One of the theorems of praxeology and one of the fundamental principles of the economic science as explained by this very learned scholar is that the action of all human beings is an exchange of their existing condition for an alternative which they believe will diminish their uneasiness better than any other alternative. This is a theorem which refers “with the full rigidity of (its) apodictic certainty and incontestability to the reality of action as it appears in life and history.”² But von Mises is an exception. Most students agree that man maximizes or mini-maximizes only incidentally. He acts significantly when he is motivated to active economic achievement by the incentives and with the intentions we have examined above. This activeness is the second component of a description of real economic conduct. Man builds, forms, changes, and disrupts in historically real societies and economies.

Man the maximizer came into his own in the literature of the nineteenth century. With the surge of anti-rationalism that came later he was cast aside – almost crushed. But all of the various conservative-progressive factors (of Freud, Veblen, Pareto, etc.), however, much the progressive element may have been favored, are recognition of the persistence and omnipresence of a conservative element. Moreover, and this seems significant, the

¹ Thomas F. Divine, “On the Assumption of ‘Rational Conduct’ in Economic Science,” *Review of Social Economy*, VIII, September 1950, 86. In reference to rational determinism, he speaks of economists assuming that man acts rationally in the sense that he follows “a uniform and constant pattern and that pattern consists of seeking the highest returns or the maximum satisfaction of wants from the use of any given quantity of scarce resources.” Uniform and constant pattern were italicized in the original.

² Ludwig von Mises, *Human Action, a Treatise on Economics*, 40. Cf. also Josef Solterer’s review of this treatise, *Review of Social Economy* (VIII, September 1950) 125-6.

conservative element is in some sense an equilibrating tendency. This has been brought most clearly by the recent work of Professor Solterer¹, who has observed the two-fold nature of economic reality: 1) the “self-equilibration” of the economy, “the regularity in the affairs of the markets,” etc.; and 2) pulsation – “the effects of leading economic activity into new paths.” This is illustrated quite clearly by contrasting the two diametrically opposed entrepreneurs of Walras and Schumpeter described in chapter four. The Walrasian entrepreneur – the man who is confronted with specific relationships of quantities, prices, and his own utilities, acts rationally to maximize his net advantage and in doing so exemplifies the role of equilibrator in the economy. The Schumpeterian entrepreneur, on the other hand, introduces changes and thus disrupts the equilibrium. Entrepreneurship (in the Schumpeterian sense) is more significant socially because without it, economic development is impossible. But the very presence of propulsive elements may be hazardous: a capitalistic economy without them will simply stagnate in gradual stages; an economy with pulsation but without an equilibration tendency may well explode. The ethical problem is necessarily introduced here. The equilibrating element which is actualized principally by exchange transactions and catallactic relations requires as a condition of its existence the virtue of honesty; the progressive element requires a virtue less intelligible and more difficult to acquire – viz., responsibility. The entrepreneur does more than change the existing status and lead activity into new directions. He “attempts to actualize the good as he sees it.” In doing so he forms a new order that will be beneficial to society in accordance to the extent that sense of responsibility is developed and

¹ Josef Solterer, “The Entrepreneur in Economic Theory,” *Review of Social Economy* (VIII, March 1950) 10-9; “Quadragesimo Anno: Schumpeter’s Alternative to the Omnipotent State,” *Review of Social Economy* (IX, March 1951) 12-23.

universalized. This is a new concept, borrowed from Schumpeter but yet more general. The entrepreneur is the innovator and thus the disruptor of the equilibrium, but yet he possesses inherently the equilibrating quality of moral responsibility. This ethico-economic concept has been designated by Solterer the “order-former.”¹

The pursuit of motivation has led us to a consideration of economic morality, organization, and responsibility, all of course within the domain of human action and economic policy. It is, consequently, no longer the concern of this chapter – rather it is of great importance in its own right and deserves for its further development the interest of the exceptionally talented ethicists and economists.

¹ It is worth noting that the entrepreneur as order-former has been recognized by Alfred von Martin. This contemporary sociologist, obviously displaying the influence of Werner Sombart, recently described the Renaissance entrepreneur as the producer of order as a human work of art. “In contradistinction to the nobleman as well as the mediaeval peasant or artisan, the bourgeois entrepreneur calculates; he thinks rationally, not traditionally; he does not desire the static (i.e. he does not acquiesce in the customary and the traditional) or the disorderly but the dynamic (i.e. he is impelled towards something new) and the orderly. He calculates, and his calculations take the long-term view. All sentiment (such as the peasant’s love for his own or the pride that the artisan takes in his handiwork) is foreign to him. What he values is the drive and discipline that produces order as a human work of art.” *Sociology of the Renaissance* (London: Kegan, Paul, 1945) 8. We notice that both conservative and progressive factors are present; rational maximization on the one hand; the drive for activity on the other. Of course, the quality of responsibility is missing as may well have been the case actually among Renaissance entrepreneurs.

CHAPTER FOUR

INNOVATION AND THE LOGIC OF ECONOMIC CHANGE:

A SUMMARY OF SCHUMPETER'S CONTRIBUTION TO ECONOMIC THEORY

Professor Schumpeter devoted his entire life as an economist to an investigation of the phenomenon of economic change. As an economic historian, Schumpeter – not unlike Marx before him – concerned himself with an analysis of the development (historical change) of economic systems. But this was subordinate to his main task. Unlike Marx, he did not conceive his contribution to lie in history – in specific time or events. Schumpeter was always the theorist first, i.e. the simplifier in somewhat the sense of a caricaturist who distorts because he employs but few strokes – yet accomplishes – if we grant him genius – more than the photographer who encompasses all.

Many years of trials, errors, observations, and inferences, were necessary to construct an intellectual mechanism which would produce economic changes. Nevertheless, the characteristics which Schumpeter lifted out of existent reality and employed as pieces for this mechanism – what he enjoyed calling his “pure model” – are few indeed. We may easily summarize this tremendous construct by proposing answers to our fundamental questions.

1. The first concerns the original state, i.e. the positions before the change took place. What is the original state out of which the new condition comes to be? (What is the material cause?) The Kreislauf or economy of stationary flow answers this fundamental question. It is that condition wherein economic change is absent. This, then, is what will be affected when change is introduced.

2. How is this change brought about? (What is the formal cause?) The pure model displays the action of an innovation which disrupts the statical repose of *Kreislauf*. Credit is created to supply funds for the innovation and an interest rate comes into being to remunerate for this flow of capital. The new enterprise will employ workers, and also produce something additional (rise of employment and production). Finally, if the new enterprise is successful, profits will appear for the first time. In short, the new economy must be contrasted to the *Kreislauf* in reference to the role of credit, capital, interest, profits, and the like.

3. Who or what brings this change about? (What is the efficient cause?) In Schumpeter's "pure model" the initial mover is the innovation - or rather to personify this concept - the entrepreneur. It is commonplace - particularly in the literature on the business cycle - to find that in place of the entrepreneur something relative to the financing of the enterprise is offered.¹ This is understandable since the request for funds is actually the first physical thrust to disequilibrate the economy - the plan of the entrepreneur is not affective in itself. But, credit can never be more than instrumental; that is to say, under the influence of a principal agent. In this case, credit is under the influence of the planning of the entrepreneur.

4. Finally the question must be asked, why was the change brought about? (What is the final cause?) This impels an examination of the intention of the entrepreneur.

¹ Such (monetary) explanations of the business cycle are quite common. Cf. Fisher, Hawtrey, Hayek, etc. E.g. Hawtrey reasons that economic change - or more explicitly the business cycle - is the result of credit expansion. Banks have larger gold reserves - due to an increase in the actual quantity of gold - which reduces the discount rates. This in turn will affect the merchants; they will begin to seek funds. The effect will be increased demand for producers' goods, and soon to increased business activity everywhere. (R.G. Hawtrey, *Trade and Credit*: also "Trade Cycle" found in *Readings in Business Cycle Theory*.) Our methodology would require in the system cited that we pronounce credit expansion as instrumental to the quantity of gold made available.

Schumpeter's first answer is the maximization of profits. However, profits are hardly enough to explain the actions of this restless enterpriser. Consequently, Schumpeter speaks of the delight of venturing and the joy of creating. We have concerned ourselves with this aspect of changing economic reality in the preceding chapter.

Each of these four answers combines to give a solution to the problem of the source of economic change. We shall be concerned specifically in this chapter with the prechanged state (the *Kreislauf*), and the changed condition resulting from the introduction of an innovation, i.e. the material and formal aspects of entrepreneurship respectively.

The *Kreislauf* and Economic Change

The concept of the *Kreislauf*, or stationary flow, is a great contribution to pure economic theory. Yet in one sense it is not Schumpeter's contribution at all. The *Kreislauf* is essentially Walras' concept of general equilibrium. Schumpeter went beyond Walras, however, in that he employed the general equilibrium situation as a starting point toward an explanation of economic change. It has often been said that Walrasian equilibrium is a generalization of Marshallian equilibrium; the former describes the economy generally while the latter describes it partially, i.e. it describes a specific segment of the economy. So also the Schumpeterian pure model, of which the *Kreislauf* is a part, is a generalization of Walras' model. The Walrasian situation is not as extensive as was formerly assumed. It is not a generalized situation from which all economic processes may be logically derived. Rather, it is a specialized case which may be generalized further by the addition of the disrupting entrepreneurial act and its resultant monetary surpluses, profits, and interest. The Walrasian model – it has been found – is satisfactory only to analyze economic

processes that are either stationary or steadily growing.¹ The latter involves those changes due to external disturbances to which the system is able to adapt itself smoothly. Schumpeter's pure model, then, may be described in the simplest possible way as an intellectual mechanism which explains the effects of introducing internally active elements into a condition of Kreislauf or general equilibrium.

Schumpeter offers this definition of the Kreislauf. It is "an unchanging economic process which flows on at constant rates in time and merely reproduces itself."² This is an economy of an isolated community, where private property, division of labor, and free competition prevail; where everyone lives on goods produced in the preceding period; where market possibilities are known by experience; and where there are no changes except in response to external factors and the like.³

A general equilibrium condition is assumed. If any element within the system is dislocated, the forces within the system will move in such a way as to react to the disturbance to absorb it. This is an analogue of Le Chatelier's mechanical principle of equilibrium. It is also Boulding's condition of economic homeostasis wherein the organism – and by analogy the economy – reacts to any disturbance of its rest by setting in motion behavior on the part of the organism which tends to reestablish its equilibrium. "If the equilibrium is disturbed, 'wants' are set up which induce the body (economy) to act so as to restore its optimum condition."⁴ The efficient factor whose movement is responsible for the

¹ Schumpeter, *Business Cycles*, I, 98.

² *Ibid.*, I, 35-6.

³ Cf. Bernard Dempsey's description of the Kreislauf in his *Interest and Usury* (Washington: American Council on Public Affairs, 1943) 63.

⁴ Kenneth E. Boulding, *A Reconstruction of Economics* (New York: Wiley, 1950) 26-7.

retention of this equilibrium is the Walrasian entrepreneur. (Schumpeter does not give an explicit name to this agent but he is, of course, implied in the Kreislauf.) The Walrasian entrepreneur takes his position in the center of the circulation of economic goods. He buys natural resources and services from their owners and sells products to consumers. But the owners of the resources are also the buyers of the products. If, then, in the circular flow there should be any deviation of price or quantity from its equilibrium condition, the Walrasian entrepreneur will move to buy and sell to eliminate the temporary profit and loss that results. (See Figure 1.)

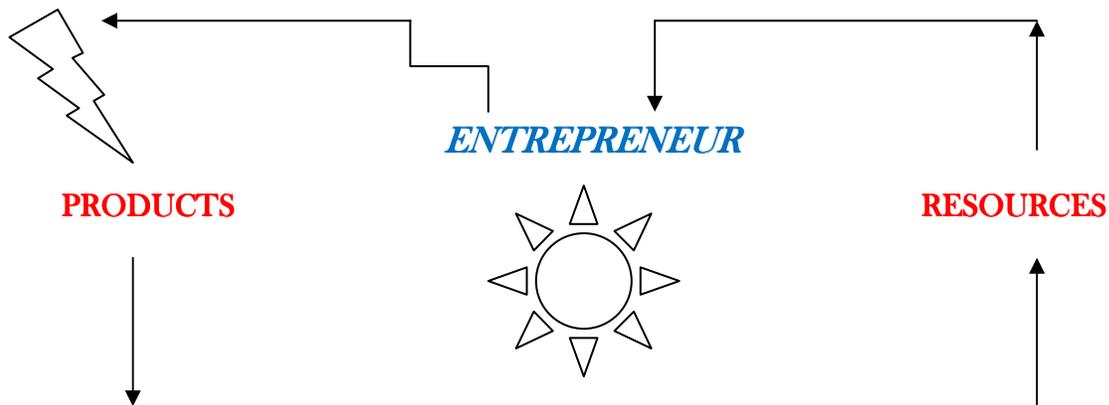


FIGURE 1.

The entrepreneur plays a most important part in Schumpeter's economic system, but this concept must not be confused with what has been spoken of here. In fact, the two are diametrically opposed. The Walrasian entrepreneur is the preserver of the equilibrium. He lacks an income that is peculiar to his function. Surely profit is not income for this entrepreneurial act. Granting perfect competition no profit prevails. "Les entrepreneurs no

font ni bénéfice ni perte.”¹ It is the thought of Barone that he is rewarded with a wage exactly like any other skilled laborer.

The Walrasian system of general equilibrium is a system without surpluses. The income flowing to the entrepreneur is a wage not profit; the latter is a surplus and as such is denied existence.²

On the other hand, the Schumpeterian entrepreneur is the disrupter of the equilibrium. This entrepreneur is the recipient of an income flow resulting from his disruptive function. This income we call profit. It is helpful to keep the distinction between the two concepts clearly before us. The Schumpeterian concept is of far greater importance for our purposes and so we shall refer to it simply as the entrepreneur.

The decisive factor of a *Kreislauf* situation is the needs of the individuals. Granting complete rational and conscious conduct, the wants of the individuals will be satisfied in the manner described by the two laws of Gossen. The first law is the law of diminishing marginal utility; the marginal utility of an object declines with each increase in the quantity consumed. The second is the law of maximization of satisfaction; given a choice between two enjoyments, the relation between them must be such that at the moment they are discontinued the amounts of all enjoyments are equal.

Employing the methodology introduced above we may summarize the value theory implicit here. (Implied is the well known marginal utility theory of value). Clearly there is no strategic precedence possessed by any factor employed in the production of the product that is to be valued. That is to say, there is no precedence of factors in the sense (say) of the Physiocrats who trace value exclusively to land; or of Smith and Ricardo when they preach

¹ Leon Walras, *Elements d'économie politique pure* (Paris: R. Pichon and R. Durand-Auzias, 1926) 195.

² Francis Y. Edgeworth, *Papers Relating to Political Economy* (London: MacMillan, 1925) I, 25.

a labor theory of value. Rather all factors are on equal terms. How then is value determined? This question involves an explanation of a change; the change is the coming into existence of a value. An adequate treatment of all questions of change requires that the fourfold answer be offered. The value of a product comes into being because countless individual agents are available in the economy; these agents comprise potentially the finished product (material). The price of each of these agents is the highest offered. The value of the product comes into being, secondly, because the agents are actually brought together into combination and their prices added; the summation of these agent prices being the opportunity cost of the product. Assuming pure competition, the market value equates this opportunity cost (formal). Thirdly, the value of the product comes into being directly through the rational acting of all individuals in the community; each buying and selling in the marketplace (efficient). Finally, the value of the product comes into being because of each individual's desire to satisfy his wants and his consequent action which conforms to Gossen's two principles of economic behavior (final).

The importance of demand – more specifically of response to hedonistic motivation – stands out above all else in the economic process of the Kreislauf or general equilibrium. Schumpeter says in this regard: “Production follows needs, it is so to speak pulled after them.”¹ Now it is not difficult to see why this is so. An investigation of the Kreislauf teaches us in much the same way as a biologist's investigation of a living but motionless animal. If we were able to examine, for instance, the whole body of a sleeping man, we might report with scientific soundness that, because of the cravings of the instincts, etc., these are of primary importance to this type of being. Nevertheless, we must not forget that we cannot

¹ Schumpeter, *The Theory of Economic Development*, 12.

expect to reach an adequate understanding of the nature of this man without consideration of genesis, evolution, etc., as well as static analysis. The same is true of an economic process. Consumer's wants is the fundamental factor driving the process of the Kreislauf; however, in an actively dynamic economy the initiation of economic change is traced most frequently to another source, viz. to production.

Nothing more than simple empirical observation is required to show that producers initiate economic development. Consumers' wants either result from the producers effort, let us call this creative demand; or, at most, condition the producer's action – a sine qua non. Concerning the first, Schumpeter asserts that the great majority of changes in commodities consumed have been forced upon the consumers by the producers. Some examples follow:

Railroads have not emerged because any consumers took the initiative in displaying effective demand for their service in preference to the service of mail coaches. Nor did the consumers display any such initiative wish to have electric lamps or airplanes, or to listen to radios, or to chew gum.¹

To investigate the occasions when demand has been formed by the initiative of the producer would involve writing a complete history of business activity. We can do no more here than mention a typical – yet little known and notably unimportant – case exemplifying the manner of demand creation:

Frederick Tudor was a Boston merchant who was active during the early part of the nineteenth century. He conceived the idea of shipping ice to the West Indies. The inhabitants of these islands were for the most part entirely unfamiliar with the uses and value of ice. Consequently, if Tudor's business enterprise was to be successful, he must first

¹ Schumpeter, *Business Cycles*, I, 73.

educate the people there to appreciate ice; he must create a demand for his product. In his private papers he tells us how this is to be done. First, it is necessary to find one of the most conspicuous barkeeps on an important island, give him a jar (ice box), and keep it filled with ice for a year without any cost at all to him. The object is to make the whole population use cold drinks instead of warm or tepid. This one conspicuous barkeep, selling all of his drinks cold without any increase in price, will accustom the drinkers to prefer them. Tudor estimated it would take three years to effect this change of taste. Over a period of years, then, the competing barkeeps will buy ice or find themselves unable to survive. Says Tudor, “they are compelled to do what they could in no other way be induced to undertake.” Each year after Tudor’s initial success competition became more pressing but because of the start that Tudor made it was possible for the family to carry on the business until 1880.¹

We have seen that demand is created; that is to say, consumers’ wants result from the activity of the producer. However, we must not neglect to acknowledge the prime importance of wants as a condition of the producer’s action. While we cannot speak of wants as the determining factor of new economic activity, yet we do quite properly speak of it as a necessary condition of this activity. The new economic activity does not proceed from the wants and desires of the consumers; but they are required in order that the activity may come into being.

The recognition that the entrepreneurial producer initiates economic activity and teaches the consumer to want his new products – this recognition that destroys the

¹ All of the information above, including the quotation, was taken from the article, “Supplementary Material on Frederick Tudor’s Ice Project,” *Bulletin of the Business Historical Society* (IX, February 1935) 1-6.

omnipotence of the consumers' demand; is the first thrust at the motionless tranquility of the Kreislauf. The first effect that is evident to the theorist is that the value theory outlined above is peculiar to the Kreislauf and will not apply in the new changing situation. The utility functions of the individuals are now considered negligible as primary determinants of the economic process. The two laws of Gossen hold of course; but they are now seen as subordinate to a prior force. The law of maximization can no longer be accepted with the same weight if it is realized that rather than being a quantification of autonomous rational conduct, it is actually the response to (say) a skilled advertising agent.

It becomes necessary at this stage that we recognize that there are at least three kinds of economic processes. The Kreislauf is the process which monotonously reproduces itself. It is circular in the sense that the Greek cyclical theory of history is circular. There is no beginning or end; economic life flows in a definitive and constantly-recurring pattern.¹ The other types of economic process are progressive rather than circular. (Progressive is used here as a contrary to circular. Schumpeter religiously avoids the word because the reader is apt to associate it with the eighteenth and nineteenth century – Condorcet's – “idea of progress.” Progress here implies no more than that each moment of historical time brings a unique and non-recurring situation.) The progressive or changing economic processes are termed “growth and “development.” The notes, adaptation and propagation, distinguish the two. Returning to an earlier analogy, we can visualize Kreislauf, growth, and development as comparable to three distinct human processes. The Kreislauf is not unlike the motionless, but certainly not lifeless, sleeping man mentioned above. Growth

¹ The translator of the *Theory of Economic Development*, with Schumpeter's approval, calls this the “circular flow” (1934). This is the translation of Kreislauf, the German term for the process (1909). In his later books Schumpeter calls it the “stationary flow” (1939).

reminds us of the determined (non-free) behavior of man; man adapting himself to the forces which he encounters in the world. Development is a process comparable to those acts of man that are peculiarly human; those infrequent acts by which man on his own initiative changes in some small way the world in which he lives.

An adequate definition of a growing economic process would necessarily include three elements: increase, continuity, and adaptation. "There is economic growth during any stated period if the trend values of an index of per capita total output of goods and services have increased during that period."¹ There is also economic growth if the variations in the process are continuous in the mathematical sense that the limit is approached by a pathway without clefts or gaps. Finally, there is economic growth if the change occurs in such a way that the disturbance is not perceptible; any disequilibrium is currently absorbed.

Growth is a response of the economic process to external factors. By definition, it is never autonomous. By growing, the economy adapts itself to the steady pressure of such factors as monetary accumulation, or increase in population. Under ordinary conditions, the former will disturb the economy by increasing the supply of capital; the latter by increasing the supply of labor. But there exists economic activity of a different type – activity which is not adaptive but creative. Contrasted to growth this change does not involve a quantitative increase but qualitative difference; not mathematical continuity but infinite discontinuity; not adaptability but creativeness. Any act that possesses these characteristics may be called an economic innovation. The economic process wherein

¹ Schumpeter, "Theoretical Problems of Economic Growth," *Tasks of Economic History*, (Supplement to the *Journal of Economic History*, III, 1947) 2.

innovations are found at work is said to be “developing.” To put this in still another way, “economic development” is the response of the economic process to innovation.¹ There is economic development if new production functions are introduced into the process (qualitative difference). Moreover, there is economic development if a change is introduced “which so displaces the equilibrium point that the new one cannot be reached from the old by infinitesimal steps (infinite discontinuity). Add successively as many mail coaches as you please, you will never get a railway thereby.”² Finally, there is economic development if some ideas that men have for doing things differently are put into practice (creative activity).

An internal change is one that arises from within the economic process. This concept gives recognition to the proposition that economic change would occur even if those factors from the outside ceased to play their part – even if wars, danger of wars, revolutions, governmental interferences, and the like suddenly ceased to have an effect upon the economy. Internal changes are ignited by innovations – the carrying out of new combinations of economic action and material. There are several general types of these innovations. The spark which is the source of autonomous change within the economic process may be: the introduction of a new good – one in which consumers are not yet familiar; the improvement of the quality of an old good; the introduce of new methods of producing old commodities; the opening of new markets; the opening of new regions which

¹ Economic development is the terminology of *The Theory of Economic Development*; economic evolution is used in *Business Cycles*.

² Schumpeter, *Theory of Economic Development*, 64.

offer a new supply of materials; or finally, a new form of business organization.¹

The important point to recognize is that innovation is the act which carries the creative element into economic activity as distinct from the adaptive nature of growth. The innovation as it grows old and becomes established loses the characteristic of ignition. It then begins to follow impulses and it becomes adaptive itself. Nevertheless, the innovation in its role as initiating force is the key concept in economic theory. Through it, it is possible to trace the whole chain of disturbances which it sets off.

Innovation and the Changed Condition

Naturally an innovation requires a plan. This is the first step in an operation of autonomous economic change. However, the plan has no perceivable effect upon the economic process. This honor is reserved for the second step, the financing of the innovation. The entrepreneur, or innovator, must subject to his control the natural resources and services required to carry out the innovation. This can only be done by purchasing these economic goods. The sum of means of payment which is available for the transference of economic goods from their owners to the entrepreneur is termed capital.² Capital, then, is money. When the commodities and services are received and payments are made, capital leaves the hands of the entrepreneur; only the goods remain. Capital is distinguished from the more general term, money, simply by its use; it is money used to divert factors of production to new uses – to transfer production to the new direction decided upon by the innovator. The concept capital is no longer troublesome if we conceive

¹ Cf. Schumpeter, *Theory of Economic Development*, 66; also his *Capitalism, Socialism, and Democracy*, 83.

² Schumpeter, *Theory of Economic Development*, 122.

of it in this light; it is the factor, monetary in nature, which stands between the world of goods and the plans of the entrepreneur for their use.

The capital necessary to finance an innovation may be obtained from old funds or new. Concerning old funds, the entrepreneur himself may employ his own personal funds (in doing so he is acting not as entrepreneur but as capitalist) or he may borrow the needed amount. As to the source, several pools may be tapped to obtain these already-existing funds. They may have been previously acquired profits, personal savings, or liquidated assets. Usually, however, the entrepreneur is a “new man,” i.e. one who has not already been conspicuously successful in the business world. He is not likely to have a large personal supply of capital. He may borrow; but here too we notice that old funds are more frequently earmarked for less venturesome investments. Furthermore, it is very often necessary for the innovator to build far ahead of demand; this entails great risks and requires very long term borrowing. In short, new funds are more suitable for financing innovations.

The term new funds is meant to indicate that money is “created” or “formed” in response to specific needs. It may be note creation, i.e. an authoritative agency adds new fiat money to the monetary stream. It may take the form credit creation. Since contemporary societies have substituted near-money for actual currency to so large an extent, credit creation has assumed far more importance than note creation. The process involves the creation of bank deposits. A bank has created credit if it has recorded deposits whose value exceed the currency that has been actually deposited or lodged by the customers in the bank. This is possible for two reasons: one concerns the nature of modern banking institutions; the other the nature of money. The creation of purchasing power by

banks is possible: 1. because no part of the loans are lost to the banking system as a whole, and so the increase of bank deposits is unlimited – at least theoretically – except by a reserve ratio or the like; and 2. because money is not a commodity, and so unlike any commodity it is possible for it to be manufactured without cost (creation) – in fact it is very difficult to prevent this from occurring.

Capital is the fund that the entrepreneurs need to purchase the agents of production. Credit is the instrument by which capital is obtained if it is necessary that capital be borrowed. It is by means of credit that “entrepreneurs are given access to the social stream of goods before they have acquired the normal claim to it.”¹ Credit is created by banks in order that producers’ goods may be transferred to the entrepreneur from their previous employments. How are we to judge whether the new use to which these goods are to be put is socially preferable to the old? We cannot answer this here except to say that it does not become a problem until we assume full employment of the respective factors. The only judgment accounted for in this (Schumpeter’s) model is to the “soundness” of the innovation, i.e. to its financial success. That it is “sound” is evident if profit appears.

Credit must be acquired before it is known whether the innovation is successful or not. Credit is an instrumental cause of innovations; profit is an effect. A loss will occur if the new venture is not able to produce products equal in value to the credit obtained plus the interest charge. Who, then, is to decide whether or not the risk should be taken on this (or that) specific innovation? In a socialist state, there is a public official whose duties require that this proposal be examined and, in turn, accepted or rejected. If it is acceptable, the official will issue orders for productive agents to be withdrawn from their present

¹ Ibid., 107

employments and presented to the entrepreneur for his use. In a capitalist society this is not possible because the productive resources are not controlled by a centralized planning board. Here, credit draws the agents to the new producer. In a case of credit creation – which Schumpeter considers to be common enough to deserve the title of “the monetary complement of innovation”¹ – the decisions of acceptance or rejection rest exclusively with the banker. For that matter, modern financial institutions are such that most credit instruments - including those carrying old funds – are piloted into channels by the banker.

Bankers are the Conservatives in the two-party system of modern economic society; the innovators are the Progressives. Both have preeminent roles. The former temper the disruptive surge of those who seek to change; the latter prevent the complete withering away of all original economic activity. More specifically, bankers are essentially judges. It is the function of a banker to predict the soundness of the venture which the innovator has set before him. If he approves it, he will provide the entrepreneur with sufficient capital for his needs.

A capitalist, by definition, is the supplier of capital. Consequently, he accepts the risk and is remunerated in accordance with the probability of loss. The capitalist meets with the entrepreneur and the banker in the money market. The entrepreneur is on the demand side; the capitalist, the supply side. The banker has two positions which are somewhat difficult to describe. First of all, being the judge of the financial soundness of the innovation, he stands between the buyers and the sellers. Here he is a type of middleman. On the other hand, the banker almost always acts as a supplier of funds. The capitalist

¹ Schumpeter, *Business Cycles*, 111.

brings old funds to the money market; the banker, qua capitalist, creates new funds for the entrepreneur's use.

This supply and demand relationship between the buyers and sellers of capital is not mechanical in the sense that commodity market is mechanical. The banker as judge is the indispensable human element involved in monetary transactions. It is for him to evaluate the objective advantages that the new enterprise possesses to enable it to meet the hostility of the economic world. But he must go beyond this; he must get to know his customer, the entrepreneur. He must be familiar with his personal habits, his business record, and the like. (It is not surprising that, as the pendulum of history shifts toward socialism, the government wants more of this type of information. The government official spoken of above is gradually replacing the banker as the judge of valuable innovations.) The bankers' knowledge is of an intimate nature; yet, the competent banker is independent of personal association with the entrepreneur. Most of all the banker accepts neither responsibility in the enterprise nor gains from its success except what is due him for the loan.

Profit comes into existence as the result of "sound" innovations. A typical illustration might describe an entrepreneur's ability to produce a product by employing smaller amounts of some or all of the factors of production than the traditional technique of production employees. He buys the productive resources and services that he needs at prevailing prices, but it is not necessary that he buy as many as his competitors. He sells his product at the prevailing market price. His receipts will now exceed cost; the difference is profit.¹

¹ Schumpeter, *Business Cycles*, I, 105.

Profit is the income due to the entrepreneur for his service, i.e. for changing the production function. This income is properly due to him as wages are properly due to the worker, rent to the landowner, and interest to the capitalist. “It is the expression of the value of what the entrepreneur contributes to production in exactly the same sense that wages are the value expression of what the worker produces.”¹ The income of the entrepreneur is not to be confused with a wage – say that of the manager. The manager is the supervisor of the plant; he is the director of the workers in their routine daily tasks. Moreover, he is remunerated for this work and receives for it a wage. But, wages are always cost-factors; the income of the entrepreneur is not. Profit does not enter into cost but rather is the residuum after total costs are subtracted from receipts. It is thus a surplus and so remains outside of the law of costs. This surplus is only temporary. Gradually competitors will also seek the benefits of the new source of profit. Profits will remain only until the production function becomes common usage; receipts will then equal costs and profits will have completely disappeared.

Unlike profit, interest is a cost; but it is a cost that is paid out of anticipated profits. In a profitless economy, the interest rate would be zero except for frictional elements. They may be “errors and windfalls, unintentional and unexpected deviations of results from expectations, conditions of distress and accidental superabundance.”² The interest from these is not a surplus value, but a deviation of actual values from normal values. This type of interest is of little importance. At most, frictional disturbances form a minimum positive

¹ Schumpeter, *The Theory of Economic Development*, 153.

² *Ibid.*, 172.

rate of interest which the buyers of the services of money cannot avoid paying. Except for this, an economy displays a zero interest rate until the first entrepreneurial act.

Productive interest will arise out of the entrepreneur's demand for current funds. The entrepreneur is the most important and prime source of productive interest. He is willing to pay the accepted price for current purchasing power because he anticipates a more advantageous use for it than its present employment. The development of the entrepreneurial act within the economy causes repercussions. The increase in demand for certain goods will increase the demand or purchasing power. Thus, the price for the use of money rises. Naturally this affects anyone who needs credit for any reason; regardless of whether it be for the financing of innovations or (say) a municipal street-paving project.

In summary, interest is the flow of a portion of entrepreneurial profits to the capitalist in payment for the funds he has supplied. It is the most typical economic characteristics of a system of private property. Interest must be paid because other people hold possession of the resources needed for an anticipated productive venture. In short, interest is the price of purchasing power – which purchasing power will be offered to the owners in return for their resources.

Schumpeter speaks of the rate of interest as the coefficient of tension in the economic system.¹ He means by this that we might consider the interest rate as a meter which measures the extent that the economic process has developed away from equilibrium. (Of course, a government controlled – 2 percent – interest rate is not useful in this manner.) If we agree that business cycles are primarily fluctuations of industrial activity, then a time series of interest rates will coincide with the business cycle.

¹ Schumpeter, *Business Cycles*, 126.

The description that follows may serve first of all as an introduction to an explanation of the business cycle; and secondly, for our purpose as a summary concatenation of the logic of the economic movements in a capitalistic society.¹

1. We begin by assuming the *Kreislauf* situation; a condition without surpluses – expenses will always equal receipts, no profits, no (productive) interest, no capital (capital is not possible without an interest rate).

2. From within this equilibrium situation, and as a result of the free deliberate action of a man whom we entitle the entrepreneur, there is born a plan whereby a certain commodity is to be produced at less expense than the accepted cost of production.

3. The entrepreneur presents his plan to the banker for his support. If the banker approves it, he offers the entrepreneur credit – “his entrance ticket to the social store of means of production.”

4. We associate the financing of new things with “new” funds – the greater portion of “old” funds is employed in less venturesome pursuits. The credit created for this purpose will widen the monetary stream. This is evidenced by the increase in the total volume of payments.²

5. Because the supply of commodities has been unaffected as yet, prices will rise if we assume full employment (quantity theory of money). The price for the use of capital is no exception – so the interest rate rises. Moreover, due to this general rise in prices, money

¹ The description that follows is taken from Schumpeter’s *Business Cycles*, chapter IV, 131-139.

² In an economy where innovational activity persists this will always have a rising trend. Professor Solterer calls this the law of system expenditure. - - - “In every entrepreneurial society there is increasing money system expenditure.” “The Entrepreneur in Economic Theory,” *Review of Social Economy* (VIII, March 1950) 16-8; and “Review of von Mises’ *Human Action*,” *Review of Social Economy* (VIII, September 1950) 129-30. The significance of this phenomenon is evidenced by his statement: “Entrepreneurial activity is the efficient cause, and increasing system expenditure is the formal cause of surpluses and capital.”

incomes are larger. With supply prices, wages, rents, and interest going higher, we can say in summary that costs are rising.

6. These changes spread through the economy as the result of entrepreneurial activity but they occur even before the innovation begins operation. They are repercussions due to the increased demand for factors of production. Some sectors will fare better than others according to how the shifting of demand affects them. These disturbances bring to the firms what might be termed “Windfall” gains or losses.

7. In time, the new plant of the innovator is finished and it sends its products into the market. A stream of returns flow back which are necessary to pay for the debts incurred. However, because of the reduced cost, a surplus remains after all expenses have been paid. This is entrepreneurial profit.

8. Entrepreneurial activity causes more than price variation. A successful innovation is a spark that sets off a chain-reaction of business activity. New opportunities for business expansion are opened up to old firms. On the other hand, not infrequently the new methods introduced mean economic death for some firms. In short, a process of adaptation of the economy to the innovation is logically necessary.

9. The new firm will attempt to retain in its own possession that new element which brought about the flow of profits. However, temporary success is all that can be expected. Gradually, more and more firms will use the new production function. Prices will be lowered until, finally, the product will be sold at a price which is equal to unit cost. Profits then will have disappeared.

10. Entrepreneurial activity is most likely of success if performed while the economic process is near to equilibrium. The risk of failure gradually rises as the process

moves through successive periods of adaptation to maximum prosperity. It is extremely difficult to calculate costs and plan additional innovations until things settle down. The amount of entrepreneurial activity will thus decrease and the business cycle will change direction.

11. After an innovation meets the stage of supplying the market with its product, the new firm will begin to repay its bank loans. This, happening around the time of the turning point of the business cycle, tends to accentuate the recession by withdrawing funds from the monetary stream and thus exerting a deflationary tendency. This Schumpeter names **Autodeflation**.

12. The cessation of entrepreneurial ventures and autodeflation lead the economic process back toward an equilibrium condition, toward zero interest, zero profits, zero productive loans, etc.¹ But, this equilibrium rests on a higher level; which is meant to imply

¹ A zero rate of interest as the equilibrium condition of the stationary state is not essential to Schumpeter's theory of development. "It is clear that (his) theory of a zero rate of interest....could be dispensed with, and no great harm would be done to his theory of the cycle or of development. Instead of tending to rebound to a zero rate, the interest rate would tend, after a period of innovation, to return to some other rate, alleged to represent an intrinsic rate of time preference or impatience, or any other broad margin which the ingenuity of an economist can devise." (Paul A. Samuelson, "Dynamics, Statics, and the Stationary State," *Review of Economics and Statistics*, February 1943, 61). However, some economists have objected that this is economically unsound and logically impossible. The most formidable opponent who directs his arguments specifically to Schumpeter is Lionel Robbins ("On a Certain Ambiguity in the Conception of Stationary Equilibrium," *The Economic Journal*, June 1930, 211-4).

Robbins contends that it is invalid to assume that constant flows of distribution are attained by means of an interest rate. Otherwise why should labor and resources be devoted to the maintenance of produced means of production? No net remuneration will be forthcoming and so there is no reason to refrain the owners of capital goods from enhancing their present consumption and causing distribution flows to be inequitable. Robbins insists that an interest rate is necessary at which it does not pay to turn income into capital or capital into income.

It is significant to recognize that in Schumpeter's primitive routinized economy there is no uncertainty regarding the future and no provisions made for time preference. As a consequence there is no intrinsic necessity for assuming a positive rate of interest. Samuelson has shown that under these conditions a zero rate of interest fulfills the Robbinsian requirements for maintaining

that due to the accomplishments (innovations) of the preceding cycle a greater social product is available. From this position of equilibrium, enterprise will start again.

the produced means of production. “The substitution, on even terms, of future consumption for present, would never pay if in the original situation one planned to consume evenly over time. For the increment of future consumption would add marginal units of utility which are lower simply because they are superimposed upon existing income. On the other hand, because of diminishing utility, the subtractions from present income would result in greater losses of utility because of the smallness of present income. Only an even distribution of income over time is optimal, if the rate of interest is zero, and if there is no time preference.” (Samuelson, op. cit., 63). This zero rate, it should be noted, does not involve the absence of an interest rate; rather, the rate of zero percent is that rate which will bring forth no decumulation and no accumulation over time.

CHAPTER FIVE

THE ENTREPRENEUR AND CREATIVE ACTIVITY

The modern economist may well criticize his intellectual forefathers, Smith, Ricardo, and the rest, for their failure to recognize the importance of human initiative in economic life. There shall be no bitterness in his criticism, however, for he must acknowledge how difficult it is to be objective and independent when this requires one to rise above the contemporary intellectual modes of the day. In effect, usually we think and act as products of our age. If Quesnay and Smith had ever been tempted to believe that the economic world could be understood only after a consideration of human initiative and creative activity of men, could we admit that their consciences would allow them to hold to this judgment? It is hardly likely. Rather, it seems safe to say that to the eighteenth century mind such a view would detract from the infinity of the Divine Lawgiver. Fortunately the modern economist is not restricted by this Newtonian and deistic preconception. Furthermore, he is no longer shackled by Benthamian utilitarianism – that all important set of principles of the Classical tradition. This need not be demonstrated except to say that it is difficult to find anyone willing to accept the popular assumption of a century ago that all economic activity is activated by the desire for monetary gain. More specifically we recognize that utilitarianism rests upon the principle that man continues to act rationally; but indeed, the fashions in psychology have been drifting away from all rationalism for the past fifty years. It is apparent from the evidence presented in an earlier chapter (Three) that our age is more sympathetic to the claim that innovations result from the operation of a network of automatic impulses and conduct. It seems only reasonable that we should be as cautious and critical of these contemporary explanations as we were of Quesnay,

Bentham, and others in the past. Most assuredly, the danger of being misled by our contemporaries is far greater, for we are very apt to inhabit the same intellectual milieu.

Even empirical research is suspect.

Empirical research does not consist in nor begin with a totally unprejudiced collection of evidence. The student of reality is forced, from the very outset, to select certain data, he considers relevant, and to leave aside other material which he believes to be a merely adventitious nature. This selection and the implied evaluation is determined by the general suppositions the student makes; and these are in almost all cases taken for granted to such a degree that they are never explicitly stated nor even subjected to a critical examination.¹

Furthermore, the most general proposition that furnishes the background against which the things to be investigated are envisioned

...stems from the “intellectual climate” in which a man grows up. The views which underlie all his work have been inculcated by his teachers, the atmosphere which surrounded him during his formative years, by his personal studies, and by the ideas which were prevalent in the social and intellectual milieu wherein he moved.²

With these words of caution we proceed to an examination of the work of three very respected contemporary students of human initiative: the first, an English physicist, H. Stafford Hatfield; second, an American historian, N.S.B. Gras; and finally, an Austrian economist, Joseph A. Schumpeter. We seek to abstract from the writings of these men some characteristics and significant qualities of the agent of innovational economic activity. In this way we hope to augment our knowledge and deepen our understanding of the entrepreneur as a strict cause of economic change, that is to say, deepen our understanding of the entrepreneurial efficiency itself.

¹ Rudolf Allers, “Psychoanalysis and Religion,” *Journal of Arts and Letters*, III, 1 (Spring, 1951) 27.

² *Ibid.*, 28.

Hatfield is a physicist, chemist, inventor, and at present general scientific handyman to the British government. In the thirties he wrote a treatise on the inventive genius of man.¹ We discuss this work here for one reason only: Hatfield is representative of a popular view of the creative activity of man which we might well contrast with the personal humanism of Schumpeter.

First of all Hatfield recognizes a clear distinction between intelligence – by the use of which man adapts himself to what is found useful and pleasurable in the past – and the faculty for creative activity – which alone produces new methods and new experiences. There is no correlation between the two. More often than not, Hatfield tells us, the special faculty for creative activity appears to be possessed by persons whose general intelligence is not of a high order. On the other hand, those men equipped with

an intimate knowledge of the best practice in art, science, or technology, able to grasp the essentials of a problem, and envisage exactly the results of applying known and tried methods to its solution – in short, those minds upon whom the continued existence and stability of civilized life depend, are not usually inventive or creative.²

In the field of physics, the man searching intelligently is the scientist; the man acting creatively is the inventor. The scientist is endowed with a type of talent wholly distinct from the talent of the inventor. The former involves the ability to assimilate a wide or general grasp of a subject; the latter makes it possible for its possessor to leap ahead without this general knowledge. Of course this is not to deny to the scientific genius creativity. It is perhaps accurate to say that while the scientist does not create the facts that he discovers, yet quite often he creates the means of discovering. Unlike the scientist, however, the

¹ H. Stafford Hatfield, *The Inventor and His World* (West Drayton, England: Penguin, 1948).

² Ibid., 14.

inventor is a specialist. He is a specialist in the sense that until his invention becomes a reality, the problem confronting him is an *idée fixe*. The concentrated and persistent ferocity which characterizes his efforts often appears inhuman and even insane to ordinary mortals.¹

If creative ability is not related to intelligence, how do we begin to explain it? Hatfield admits an explanation is not immediately forthcoming. The most that we can say is that it is an innate talent – much like the talent for music and painting. We notice that there is no acquired skill involved in the Eskimo's ability to take watches apart and put them together again quite successfully without any previous training; inventive genius is much like this mechanical skill of the Eskimos. Natural intelligence is also innate, but the ability to perform intelligent acts requires training, development, conscious thought, and understanding. These are not necessary to the innovation of new processes and the like. In fact, the creative act is “no more conscious than is the creation of new species or new mutations.”² Hatfield will accept that the “new” set is mutative in the strict biological sense of the word. There is an unexplainable (so far) but certainly unconscious elan in animals comparable to the *idée fixe* or inventive drive of some men. Organic and creative development proceeds as a result of this internal elan and is thus offensive not defensive. Nature – or we should say the natural elan – produces a sudden spontaneous variation from type. The result may be very beneficial to the welfare of future generations; if so it remains and prospers. On the other hand, the result may be such that the new species, product, etc., is completely unable to survive in its habitat and disappears almost as quickly

¹ Ibid., 22, 39-40.

² Ibid., 23.

as it came into being. Inventions, discoveries, innovations of all types are kinds of mutations. Some men are born with ability to form new things; they possess this unconscious inventive drive or elan. The accomplishments of such men will be accepted or rejected according to whether they are found to be useful or not.

We are enlightened by Hatfield's work. We come to realize that the qualities so necessary for creative activity are in some way different from those needed for intellectual pursuits. The inventor and the scientist are different kinds of men; as are the artist and the philosopher, the entrepreneur, and the economist. We are enlightened in another respect. The performance of the innovator is ideally spontaneous and (let us go at least this far with Hatfield) analogous to the mutative activity of animals. On the other hand, Hatfield offers no acceptable explanation of the nature of the creative elan. Like organic mutations, he tells us, human innovations are purely chance products. In the case of an invention, new patterns are produced in the unconscious. As the useful organic mutations are preserved by natural selection, so too are those innovations that seem valuable to the inventor preserved by him. Hatfield admits that this view appears improbable, yet he says, it cannot be disproved. He accepts it as his own because the only other choice is to admit the validity of some "vitalistic school of thought." This would be unfortunate because it would require a "return to some type of mysticism." We would be forced to "look upon creativeness as resulting from a super-charge or super-efficiency of this vital force. But such an admission is a sad thing for a scientific mind."¹ If we admit that Smith and Quesnay were to some extent at least the product of an age, then it seems admissible to accuse Hatfield of reflecting the intellectual fashions and prejudices of another age.

¹ Ibid., 27.

Even so, Hatfield appreciates the importance to the evolution of human existence of man's initiative and creative accomplishments. This is even more true of the next student of human enterprise that we wish to mention here, N.S.B. Gras. Hatfield is concerned with the innovator in general. Gras treats the "business man." Gras thus limits his consideration to economic activities. In one sense, however, his treatment is broader. To Gras, the businessman acting as innovator is performing but one of his essential functions. Of far greater importance is the more general concept of the businessman as an individual and a leader.

Individual leadership, Gras finds, is the source of all "progress in business and general culture."¹ This leadership is the generating, creative force with which all human progress is directly or indirectly associated. This assumption is tantamount to accepting an economic philosophy of history. Nevertheless, it differs from the Marxian economic philosophy of history in a very substantial way. Unlike the Marxian economic interpretation of history, this business interpretation is not deterministic. The difference is found in the efficient factor. In the former the agent for historical change is found to be the pressure of a specific mode of production on the class of have-nots and the consequent violence between classes. In the latter, the agent is the leadership of individual businessmen acting creatively and free. This leadership provides the yeast without which the bread of progress does not rise.

What we are getting at is that individualism in its higher reaches began in business; that business laid the foundations for the initiating and the creative power of man and the flowering of the human genius; and that our best art,

¹ N.S.B. Gras, *Business and Capitalism: An Introduction to Business History* (New York: Crofts, 1947) ix.

philosophy, science, and engineering are both direct and indirect outgrowths of business or more discriminating, of private business capitalism.¹

The students who work with Gras accept his emphasis on individual leadership. Henrietta M. Larson considers the recognition of business leadership as a necessary academic reform among economic historians, Classical economists, Marxians, even Historical Economists who have either generally overlooked man as a factor of economic life or who have seen him only as a passive element, being acted upon rather than acting. This does not mean, she says, that we must interpret history in terms of great leaders. It does mean that we must acknowledge that the activities of the business administrator entail more than conformity to immutable economic laws.² Ralph M. Hower has a similar view. Of course, he says, we cannot deny the influence of such factors as geography, natural resources, and the like; nor can we minimize their importance. Individual enterprise cannot divorce itself from its environment. However, these factors operate only through the thought and action of the business administrator. To a considerable extent this “new man” shapes our economic environment.³

The great importance of the Grasian group is its recognition of the significance of personal activity in theoretical and methodological considerations. The only other great intellectual force to bring human activity into the center of all analyses of economic life is the Schumpeterian influence. There is a paradox involved here. While the philosophical principles underlying the Grasian approach to history comprise anything but a

¹ N.S.B. Gras, “What is Capitalism in the Light of History?” *Bulletin of the Business Historical Society*, (XXI, October 1947) 90.

² Henrietta M. Larson, “Discussion on Capitalism – Concepts and History,” *Bulletin of the Business Historical Society*, XVI (April 1942) 39.

³ Ralph M. Hower, “The Effect of Managerial Policy upon the Structure of American Business,” *Bulletin of the Business Historical Society*, XVI (April 1942) 52.

personalism, yet no acknowledgment of personal humanism could motivate a student to appreciate truly human activity to a fuller extent. On the other hand, Schumpeter, by philosophical preference a true personalist, seems to have made a conscious effort to conceal or deemphasize the influence of personal activity in economic life. Says Schumpeter,

.....mankind is not free to choose. This is not only because the mass of people are not in a position to compare alternatives rationally and always accept what they are being told. There is a much deeper reason for it. Things economic and social move by their own momentum and the ensuing situations compel individuals and groups to behave in certain ways whatever they may wish to do – not indeed by destroying their freedom of choice but by shaping the choosing mentalities and by narrowing the list of possibilities from which to choose.¹

He is not adverse to making similar remarks in many of his writings and while they seem out of place alongside of Schumpeter's constant insistence on the importance of the innovator, yet he is cautiously leading us away from an extreme position; away from a Carlylean view of history. The paradox is resolved somewhat in that Schumpeter is an economist and consequently is most impressed with the function of entrepreneurship rather than with the entrepreneur himself; ".....when we speak of the entrepreneur we do not mean so much a physical person as we do a function."² Gras on the other hand is a business historian and must be concerned with the activities of specific entrepreneurs. Of course, an entrepreneur or businessman "cannot be studied without seeing him as a person and as a member of society."³

¹ Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper, 1947) 129-30.

² Schumpeter, "Economic Theory and Entrepreneurial History," *Change and the Entrepreneur*, 80.

³ Larson, *Guide to Business History*, 733.

It is exactly the stress on function that Gras and his disciples criticize. They claim that economic theory concerns itself with that “shadowy figure of entrepreneur.” This figure is seen as function rather than as a man,

that is, as the “manager,” the risk-bearer, the leader in economic development and change, and so on, rather than as a man or group organizing, planning, and directing the individual business units which make up the total business effort of a society.¹

Their criticism continues in this vein. Economists have admitted some human factor into their analytic considerations and termed it the entrepreneur, but this factor has become impersonalized over the ages. Their criticism is somewhat justified but exaggerated. It is justified in reference to the failure of economists to recognize the importance of the creative activity of the individual within the economy. Gras is certainly correct when he implies that the history of economic thought shows that there have been fashions in economic theory almost to the extent that each age or region has had its own impersonal factor to emphasize above all other factors.² To give examples: the early Mercantilists centered their entire consideration around foreign trade; Petty placed extreme emphasis on production; Smith and Marx overstressed labor as the source of value; Quesnay, land. He notices finally that no theorist placed the stress where it really belongs, viz. upon the individual leader in the business world. Nevertheless, his criticism is exaggerated in that he tends to devalue economic theory itself. It is helpful to realize that economic theory by its nature must be concerned with the human factor in respect to its economic function. In effect, we arrive here at that all important distinction between the theory of economic development, which has as its root the function of entrepreneurship, and business history – its complement –

¹ Ibid.

² Gras, *Business and Capitalism*, 189.

which focuses attention on the actual activities of specific entrepreneurs. The former is pure theory; the latter gives historical examples of the theory applied.

The concept of the businessman or business administrator is described in many of the tracts on methodology by Gras, Larson, and other members of the Business Historical Society to guide the incipient business historian in his investigations. By way of definition, Gras tells the student to look for the businessman in the sense of the capitalist who specializes in producing and gets his living by exchanging his goods and services for someone else's goods and services.¹ This concept is not satisfactory; neither the fact that the businessman is acting in the role of the capitalist, nor that he is involved in exchange transactions, seems significant enough for us to recognize the businessman as the key human factor in the economic process. On the other hand, we are immediately impressed with Larson's list of functions of a typical business administrator; first of all, the administrator formulates policies, that is he decides on objectives for a business enterprise and makes general plans for attaining them; secondly, he controls the business, that is he sees that the policies adopted are followed; and thirdly, he manages, that is he directs the operation of the business unit.² It is evident that the concept of administrator is broader than the Schumpeterian entrepreneur. Unlike Schumpeter, the Business History School is not satisfied that the businessman be reduced to an adventurer or heroic innovator. Of course, the concept administrator reserves a place for the activity of innovation in its function of planner and policymaker. Yet of equal importance, say Gras and Larson, are

¹ N.S.B. Gras, "What is Capitalism in the Light of History," *Bulletin of the Business Historical Society*, XXI (October 1947) 89.

² Larson, "Some Unexplored Fields in American Railroad History," *Bulletin of the Business Historical Society*, XVI (October 1942) 71.

the activities of control and management. If Schumpeter neglects these, the reason is he is concerned primarily with economic development. It is apparent that the control and management of a going concern does not affect the development of the economy. Nevertheless, we must certainly admit that any consideration of the human factor in economic affairs cannot disregard them. The very striking example that follows indicates the importance of management within the economy.

There was a high degree of international integration and order in monetary matters in the nineteenth century. It was generally believed until recently that this had been brought about because the financial and monetary institutions in London at this time conformed to immutable economic laws. In other words, man's economic activities had been rationally directed to conform to a natural mechanism. Most investigators now agree that this explanation is unscientific as well as degrading to man's talents for social construction. Economic machinery exists to serve man; it conforms to man's needs and desires and not vice versa. The explanation for the harmony of international monetary and trade relations in the nineteenth century is to be found in the skillful management and control of these affairs by the men on Lombard Street. The management abilities of these men made the following possible:¹ (1) Facilities were made readily available in London for the trading of a greater variety of commodities than the world has ever known. Associated with these commodity markets were the renowned commodity experts whose grading was accepted everywhere. (2) An extensive warehouse system was established and expertly managed to store the unloaded ship cargo. A band of speculators were prepared to buy

¹ Much of what follows concerning the management of the London Money Market was taken from B.M. Anderson, Jr., quoted by William A. Brown in *The International Gold Standard Reconsidered (1914-1934)*, 2 volumes (New York: National Bureau of Economic Research, 1940) I, xvii, and Sir Charles Morgan-Webb, *The Rise and Fall of the Gold Standard* (New York: MacMillan, 1934) 72.

almost any commodity from these warehouses and on very short notice. “What came to London became liquid and everything came to London.” (3) Furthermore, there was a wide and dependable security market, the London stock exchange. (4) Even more important than the markets and facilities mentioned above was the Bank of England because it was those men associated with this institution who accomplished international currency stability. The bankers of England found that the value of gold could be kept constant at its sterling value between the gold points by management – by the manipulation of the Bank Rate.

The case above presents one of the greatest examples of the importance of management ever to be discovered by the economic historian. Add to this the many cases of successful business management by individual administrators mentioned in the writings of Gras and the members of the Business Historical Society and we are left with an indelible respect for the role of management in economic affairs. Still, we have not in any way weakened the Schumpeterian hypothesis that it is innovation first and always – and not management or control – that ignites the spark to set economic development into motion. Consequently, we return again to the economic innovator to benefit by Schumpeter’s full treatment of this agent and also to examine him in the light of a personalistic philosophy.

The first characteristic of an entrepreneur that comes to our attention is the fact that he is ideally a “new man.” Old established men are not likely to take upon themselves the uncertainties and difficulties of a new enterprise if this entails struggling against established methods and customs. The whole of business and industrial history bears out the validity of this (Schumpeter’s) observation. We mention just one example. From the writings of Professor Maclaurin on the development of the electrical industry we find that

while Western Union became the leading concern in the electrical communication industry in the nineteenth century, its leaders almost completely discounted the significance of the introduction of the telephone. Notwithstanding the fact that Western Union had the financial resources and technological skill that would have enabled its leaders to exploit this related industry more rapidly than any unestablished group, it continued to confine all of its energies to the telegraph. It was only when the American Telephone and Telegraph Company grew strong that the real importance of this new method of communication was admitted. Furthermore, by 1900, Western Union, Postal Union, and the American Telephone and Telegraph Company were all established and flourishing enterprises in electrical communications; General Electric, Western Electric, and Westinghouse were the important established concerns in the electrical equipment industry. Any one or any combination of these enterprises was in a strategic position to exploit the next new method of electrical communication – the wireless – that was then entering its formative stage. There was a sufficient degree of monopoly in the established enterprises, says Maclaurin, to support research and new projects. Yet it seems correct to say that these enterprises did not visualize the potential importance of radio and so new men and new enterprises were left to develop it.¹

Besides being a new man in the sense of a man unestablished in business, the entrepreneur is also a new man financially. It is a mistake to think of him as the risk-taker because risk always falls on the owner of the means of production or of the money capital

¹ W. Rupert Maclaurin, "The Process of Technological Innovation: The Launching of a New Scientific Industry," *American Economic Review*, XL (March 1950) 94-5.

which was paid for them.¹ The entrepreneur per se does not possess this property, the capitalist does. Of course, there is a risk taken by the entrepreneur, but it is never financial. If the enterprise fails, the entrepreneur may lose his job: he may even lose his reputation and standing in the community. Entrepreneurial risk then is commonplace and not unlike the risk that a surgeon bears who decides to operate – or an engineer who accepts the position of bridge-builder. In no sense, however, can the entrepreneur described here be identified with the risk-bearer found in the writings of Dobb and Knight.

The entrepreneur pays for the use of the capitalist's property and this payment is called interest. The entrepreneur, then is the interest payer; the capitalist is the interest receiver. Ideally the charge would conform to the risk involved. Always, however, the capitalist by offering his property to be used in an enterprise accepts the possibility of losing it if the undertaking is unsuccessful. We comprehend this distinction by referring once again to Schumpeter's pure model. The entrepreneur therein begins his economic activity by first becoming a debtor; he is the typical debtor in the economy. He needs first of all credit, only then can he launch his innovation. The capitalist (or in the case of pure credit creation the banker) is the typical creditor. Granting a condition of full employment, the entrepreneur is a debtor in a deeper sense, he is the debtor to society because by borrowing a specific quantity of purchasing power he is able to commandeer goods and services for his own usage from their previous employment. Furthermore, this is done before he contributes any goods or services of his own to society.² In a socialist economy, the entrepreneur continues to be a debtor to society if not a debtor financially. In the place

¹ Schumpeter, *Economic Development*, footnote page 75.

² Ibid., 102.

of credit, the official who judges the worth of entrepreneurial undertakings and who thus corresponds to the banker in the capitalist system hands out a requisition slip instead of credit. With this paper the innovator is allowed to draw a specified portion of goods from the social stream.

The researches of Fritz Redlich in the field of business history have led him to support Schumpeter's emphasis on the new men in the economy.¹ It is the activities of these men that influence economic development and elevate them to subjects of dynamic theory. According to Redlich, the entrepreneurs are not the only new men in the economy, rather there are creative capitalists, creative entrepreneurs, and creative managers. It is helpful to dwell a moment on Redlich's concept of creative capitalist. This new man invests funds in a new and untried type of venture and in so doing, says Redlich, makes economic progress possible. Robert Morris, Jeremiah Wadsworth, and John Baker Church, investors in the first commercial bank in America – the Bank of North America – are examples of creative capitalists.² Creative capitalists are extremely important to the history of enterprise. However, financial risk may be diffused and so economic progress, depending as it does on the financing of innovations, is possible without any extraordinary personal activity on the part of individuals. Creative capitalists may be eliminated and financial risk rationalized. This is accomplished by substituting a type of risk-insurance for personal risk. It is worth noting here that the function of entrepreneurship cannot be rationalized and depersonalized in a similar manner.

¹ Fritz Redlich, "The Business Leader in Theory and Reality," *American Journal of Economics and Sociology*, VIII (April 1949) 223-237.

² Ibid.

This is not to imply that collective risk is as yet institutionalized in any capitalistic economy. It is theoretically possible, but actually there are but few existing examples. Perhaps the most enlightening case of an actual institution established for the purpose of collectivizing the financial risk that accompanies new enterprises is the postwar American Research and Development Corporation. The purpose of this Boston business organization is to encourage new and untried ideas and products by supplying enterprise with technical advice and venture capital. It finds new projects, analyzes them, sets up and assists in the operation of those chosen for financial help, and supplies capital for operation or development. The funds for the purchase of stock in these new enterprises are obtained from educational institutions, investment trusts, insurance companies and industrial corporations as well as from individuals. The stockholders of American are requested to cooperate by bringing worthwhile new projects to the attention of the corporation, to assist in appraising them, and to take an active interest in any new investment. As a result of the operation of this corporation, more than five million dollars was channeled into venture capital before the enterprise was four years old (August 1950).¹

It is apparent that economic development is possible without the capitalist performing his function singly and as an individual. The same cannot be said of the entrepreneur. While we notice in our time that some progress is being made as the result of groups of trained specialists who turn out what is required of them and often go beyond it, yet entrepreneurial activity in general is closely analogous to artistic activity and thus like a work of art an innovation is seldom if ever the accomplishment of more than one master. Furthermore, it is impossible to set up workshops for the purpose of producing genuine

¹ Cf. Robert H. Fetridge, "Along the Highways and Byways of Finance," *New York Times*, Financial Section (February 9, 1950) 3.

creative activity of any importance whether the aim involves art, invention, or economic innovation. Concerning inventions, Hatfield cites Grosvenor's statistics compiled around 1929 which show that only twelve out of seventy-two outstanding inventions since 1889 have been produced by "corporation" research. We can expect the proportion of economic innovations arising from similar rationalized methods to be about the same. Hatfield explains that the conditions under which these hired "creators" must work are not conducive to production; the steady round of 9 to 6, with lunch from 1 to 2:30 simply does not produce creative work. The great new man drives himself savagely as did Goodyear who "under the compulsion of his vision of vulcanized rubber,endured infinite hardship; such extremes as others have endured for their religious or political convictions."¹ In brief, "creative work is over work.It needs sweating and worrying in the small hours of the night, it is monomania."²

While we admit with Hatfield that a creative act comprises both vision and persistence, yet there is still more. Creative achievement reflects the highest qualities of human nature and yet the world invariably rejects it with strong and unreasonable opposition. Certainly we must keep in mind this great paradox when we evaluate recent attempts to rationalize and collectivize creative activity. The environment resists new things. The more effective the innovation, the stronger is society's opposition. Because there are no innovations to rival the railroads in importance during the second half of the twentieth century, this industry affords a good example of the omnipresent social resistance; Bogart mentions various forms of opposition:

¹ Hatfield, *The Inventor and His World*, 46.

² *Ibid.*, 49.

...doctors warned of danger of concussion of the brain from traveling at a speed of 15 to 20 miles an hour; farmers were told that the sparks from the engines would set their hay and buildings on fire; and that the noise would prevent the cows from giving milk; (and) officials refused to permit meetings to promote railroads to be held in public buildings.¹

Concerning the latter there is a stock-in-trade quotation that might be found in almost any textbook on American economic history. Yet there is perhaps no more perfect specimen to exemplify social opposition to innovation. The quotation is from a report prepared by the school board of a small Ohio community refusing permission to a railroad promoting company to use the schoolhouse. It reads in part:

You are welcome to use the schoolhouse to debate all proper questions in, but such things as railroads and telegraphs are impossibilities and rank infidelity. There is nothing in the Word of God about them. If God has designed that His intelligent creatures should travel at the frightful speed of fifteen mile an hour, by steam, He would have clearly foretold it through His holy prophets. It is a device of Satan to lead immortal souls down to Hell.²

This is the most popular type of opposition. God does not mean for man to travel to the moon, to travel faster than the speed of sound, to fly, to venture on the seas past sight of the shoreline, etc., etc. The least of us becomes a professional theologian. It is refreshing to observe a remark of Charles Carroll of Carrollton who at the age of ninety-two laid the cornerstone of the Baltimore and Ohio Railroad. "I consider this among the most important acts of my life, second only to my signing the Declaration of Independence, if

¹ Ernest L. Bogart and Donald L. Kemmerer, *Economic History of the American People* (New York: Longmans, Green, 1948) 287.

² Quoted in James Blaine Walker's *The Epic of American Industry* (New York: Harper, 1949) 91.

second to that.”¹ The words of this great man of vision offer concrete evidence that a “new man” in society need not be a young man.

The difficulties involved in innovating cannot be overstressed. In mentioning a few examples of opposition to innovations in the railroad industry we have simply introduced the important problem of resistance to development. Social resistance alone involves: the impediments arising from legal and political institutions, the reactionary pseudo-theological spirit mentioned above; the counteroffensive of those groups who are threatened by the innovations; the arduous task that confronts the innovator of having his plan financed; and finally the difficulty of creating the demand that is to win over consumers.²

And yet the opposition of the environment is not the only opposition that the innovator must meet. There is also the difficulty of the lack of data that accompanies all new things:

...many things must remain uncertain, still others are only ascertainable within wide limits, some can perhaps only be “guessed.” In particular this is true of those data which the individual strives to alter and of those which he wants to create.³

As an example, Schumpeter asks us to visualize

the situation of a man who would, at the present time, consider the possibility of setting up a new plant for the production of cheap aeroplanes which would pay only if all people who now drive motorcars could be induced to fly. The

¹ Quoted in Milton Reizenstein’s *The Economic History of the Baltimore and Ohio Railroad, 1827-1853*, (Baltimore: Johns Hopkins University Press, 1897), Studies in Historical and Political Science, VII-VIII, 20.

² Cf. Schumpeter, *Economic Development*, 86.

³ *Ibid.*, 85.

major elements in such an undertaking simply cannot be known. The situation is, proportions guarded, not different in the case of a new perfume.¹

Another type of resistance to new things rests within the potential innovator himself. If he shall be successful he must first convince himself that the great difficulties involved are worth the personal effort. It is always the easier way to remain in some established pursuit. This does not contradict the “monomania” of Hatfield; great persistence is necessary if the innovator is to overcome the social resistance, etc., but this comes only after voluntary acceptance. Man decides to act freely in the highest sense of the word and with the full realization that in doing so he is heaping upon himself unnecessary – or rather propagated – obstacles. As Berdyaev might have put it, the decision to struggle for the success of the new undertaking is the demand, not of nature, nor of reason, nor of society, as is often supposed, but of spirit. Furthermore, the idea is a simple application of Berdyaev’s great paradox that to act freely is difficult; never to raise above the set patterns and established methods of the environment – to remain in slavery – is easier. Genuine freedom presupposes hindrances and conflict. This thought is expressed in the classical language of Schumpeter in this manner: “this mental freedom presupposes a great surplus force over the everyday demand and is something peculiar and by nature rare.”²

Another characteristic of the new man may be mentioned. In no sense can entrepreneurs be said to form a social class. In this regard they are once again like their fellow “creators” in society, the artists and inventors. To acquire a class status demands a certain conventionality; but the entrepreneur is an upstart whose ideas are generally laughed at – even ridiculed in the beginning. “The truly creative artist never has any public

¹ Schumpeter, *Business Cycles*, I, 100.

² Schumpeter, *Economic Development*, 86.

because just as he is ahead of his last work, he is way ahead of his next public.”¹ Let us extend this remark of Gilson to say that creative artists – and include here inventors and entrepreneurs – have ideas too new to allow them to be accepted into a class. The class not unlike the “public” is by its nature conservative; its members live by conventions and reserve no place for potential revolutionists. The only way possible to consider entrepreneurs as members of a class is to assume that society compromises two classes, the people who constitute the masses and those who do not. Then we acknowledge that the innovators belong to the latter class. Even here, however, we have in mind Berdyaev’s suggestion that the masses be defined not so much by social as by psychological traits. One belongs to the masses if he lacks an expressive personality. “...An absence of personal originality, a disposition to swim with the current of the quantitative force of any given moment, an extraordinary susceptibility to mental contagion, imitateness, repeatability,” these characterize a member of the masses.² Such individuals are drawn from the bourgeoisie, the mobility, the industrial workers, etc., in short from every social class. The innovators quite evidently do not belong to the masses.

There are other reasons why entrepreneurs do not fit into a specific social class.

First of all they do not remain entrepreneurs long enough.

...it is just as rare for anyone always to remain an entrepreneur throughout the decades of his active life as it is for a businessman never to have a moment in which he is an entrepreneur, to however modest a degree.³

¹ Etienne Gilson, “Artists and Saints,” *Measure* (I, Winter 1950) 50.

² Nicolas Berdyaev, *Slavery and Freedom* (London: Bles, 1944) 121.

³ Schumpeter, *Economic Development*, 78.

Secondly, the new men do not form a class because the necessary qualities cannot be inherited. A business can be inherited by the merchant, a title by the noble, but the entrepreneur cannot pass on to his son the ability to formulate new production functions. The social stratum of innovators may be described as a hotel which may always be full but the people in it are forever changing.¹

The activities of the new man necessitate stepping outside the boundary of routine. This requires initiative and for this reason we offer the title of economic leader to the entrepreneur. He assumes the duties of leadership: (1) by “leading” the means of production into new channels. In a capitalistic economy he receives his commission for this undertaking by the banker who approves the new plan – the new production function. (2) He leads in the same sense that he creates demand, he does not undertake to fill a need or want but rather produces new wants and needs. Like his cousin the artist, the economic leader lives by making society want what he himself thinks they should want. (3) He leads by drawing other producers in his industry after him; he sets up the new process, the new firm is successful, and the host soon follows.

A selected list of qualities needed for such leadership is suggested by Maclaurin. They include: “visionary boldness, ‘narrowness,’ aggressiveness, persistence, business judgment, salesmanship, the capacity to pick able associates, the delegation of authority and the ability to inspire loyalty in a working organization.”²

By such leadership, the economy develops. A continuous stream of new products and new wants flood the progressive society. However, at the same time the leader

¹ Cf. *ibid.*, 156.

² Maclaurin, *op. cit.*, 111.

destroys; the old gives way to the new and so we find that destruction accompanies the innovator's activity. Extending this thought to the whole of human existence, Toynbee terms it the "nemesis of creativity;" in its economic aspects, Redlich gives it the title of the daimonic act of the entrepreneur.¹ We add this thought to our growing number of aids to methodology. We might methodically search out the destruction that lies strewn along the path of every innovational act. Keeping in mind this daimonic activity of the innovator we are not apt to neglect, for example, that the introduction of the power loom destroyed the hand-weavers' craft; that the introduction of the gasoline tractor, the mechanical picker, the innovations in ginning made cotton-growing most profitable on very extensive plantations and severely depressed the entire Mississippi Valley area; that the discovery of America by Columbus shifted the commercial center of the world from the Mediterranean to the Atlantic thus destroying the long maritime supremacy of Venice and Milan, etc., etc.

Because the economic innovator has been erroneously identified with the inventor, it becomes necessary to distinguish between them. It is helpful to preface our remarks in this regard by examining briefly Maclaurin's five questions that act as a guide in analyzing an industry:

- (a) Are major advances occurring in the sciences underlying the industry?
- (b) Is engineering art in close touch with and contributing to these advances?
- (c) Is the economic organization of the industry conducive to innovation?
- (d) Is capital freely available for radical new developments?
- (e) Do the entrepreneurs possess the requisite skills for successful innovation?²

The key factor associated with each of the above questions, except one (c), is a human agent. They are, respectively: (a) the inventor; (b) the engineer; (d) the capitalist and

¹ Fritz Redlich, "The 'Daimonic' Entrepreneur," *Change and the Entrepreneur*, 31.

² Maclaurin, *op. cit.*, 91.

banker; and (e) the entrepreneur. This logical ordering gives an indication of the steps leading to an economic change. Only (d) and (e) directly concern the economist but most economic innovations are not likely to materialize without the preliminary stages. We cannot overstress the significance of decisions in this process – the decisions of all the agents, the engineer, banker, and capitalist, but most of all the plans and decisions of the two innovators – the inventor and the entrepreneur.

Maclaurin's arrangement shows clearly the logical priority of the inventor relative to the economic innovator. Inventions are economically irrelevant as long as they are not commercially exploited. Available examples are too numerous even to list, but by way of illustration we may think of the automobile existing as early as 1804 when Oliver Evans' "steam carriage" – a little steamboat on wheels – was driven through the streets of Philadelphia. Because Evans carried the idea into practice and suffered a financial loss, we witness perhaps the first economic innovation in the automobile industry. However, the invention of the automobile can possibly be traced even as far back as the Renaissance – arising from da Vinci's discovery of the utilization of steam for propulsion.

Schumpeter's distinction between the inventor and the entrepreneur is one of personal aptitudes – the aptitude of the inventor is primarily intellectual, he "creates" and finds; that of the entrepreneur is primarily volitional, he fulfills his function more by will, "by 'authority,' by 'personal weight'."¹ New ideas are always abundant if the entrepreneur is there to exploit them. In stressing the difference between the inventor and the entrepreneur and thus eliminating a common error, Schumpeter gives valuable service. Yet his distinction is somewhat unsatisfactory. We are not justified in reducing the difference to

¹ Schumpeter, *Economic Development*, 88. Also his *Business Cycles*, I, 85.

one of the presence or absence of a creative aptitude. If the entrepreneurial act consisted exclusively of making rapid use of new technological possibilities to reform or revolutionize the pattern of production, then we might be justified. But clearly this does not fully describe the activity of the economic innovator. Each economic innovation begins with a plan or idea. Often this happens to be the inventor's blueprint but this is not always the case. In fact, among such important innovations as the automobile, cotton manufacturing, and the railroads, the significant element of the new production functions was the vision of the entrepreneur, viz., a cheap four-cylinder car for the masses, cheap cotton goods for the whole of the English nation, and new methods to finance and consolidate the roads respectively. The entrepreneurs involved were doubtless originators in the truest sense of the word. Consequently, the only distinction allowed between an invention and economic innovation involves the effect on the economy. The invention, qua invention, in no way disturbs the economic variables; the innovation on the other hand necessarily changes social production, consumption, investment, income, money in circulation, and the whole host of economic values.

Maclaurin's steps leading to an economic change underscore the importance of the human agent – but so too do all of the considerations in this chapter. All that has been said above leads us to several concluding remarks concerning man's role in the economy and in society in general. All three writers, Hatfield, Gras, and Schumpeter, whose work we have considered in some detail agree that men by their actions build and destroy. They do so not by the passive activity of choosing between commodities on the market and thus stimulating production in one direction and discouraging it in another – not by the simple use of the free-will; this was the key assumption of Classical economics and the consequent

reason why the Classicists and Neo-Classicians were unable to formulate a genuine dynamic theory of economic. Change involves more than simply free-will; it involves what Berdyaev has termed “freedom of the spirit, or the creative spiritual energy.”¹ The term creative means simply that man by his active participation changes things around in society. The term spiritual needs at least one word of explanation. It is used here in Berdyaev’s sense that changes must be made for the sake of man, for the sake of each personality who, being a man, reflects his Divine origin. In other words, man is important – or rather each individual man is – not society, not the state. Man plays an active part in making history. This activity should be directed toward the good of the person. The first is denied by the Physiocrats, the Marxists, and most schools of thought down to our time; the second is denied by the whole prevailing intellectual fashion that would direct our attention to the attainment of collective security. There is no truer remark than that of David McCord Wright who claims that the creative innovators of today are strenuously at work to form a society wherein their creative activity will be outlawed:

.....we find the paradox, so common today, by which the genuine inquirer – the very type of man who would be most unhappy in a mature socialist state, with its static pattern and rigid orthodoxy – is the man who now finds most satisfaction in creating socialism.²

Conclusion

It is now possible to synthesize the more prominent characteristics of the entrepreneur as efficient cause of endogenous economic change. First of all, the entrepreneur is observed to act with a visionary boldness that is both spontaneous and persistent. This is true to such an extent that his operation appears analogous to biological

¹ Berdyaev, *Slavery and Freedom*, 48.

² David McCord Wright, *Democracy and Progress* (New York: MacMillan, 1948) 67.

mutation. The second significant quality is his personalism. This should be understood to mean (a) that he stands alone in his struggle against both private and public opposition: he is an unestablished or “new man” in his community. Furthermore (b), he is an individual in the sense that he is the member of no hierarchical class: class status demands a certain conservatism and respect for tradition that he, qua innovator, cannot be expected to give. Thirdly, the entrepreneur is an originator and leader: he envisions changes within the economic community and realizes these changes by his active participation and leadership. This is accomplished (a) by “leading” the means of production into new channels, that is to say by establishing new production functions. This is done also (b) by demand creation – breaking the resistance of the consuming public against his new enterprise. It is done, finally (c), by drawing a host of followers to imitate and compete soon after the first burgeoning of success.

CHAPTER SIX

THE SYSTEM ENTREPRENEUR AND SOCIAL POLICY

Writing in 1946,¹ Professor Cole compiled a list of elements which together “condition efficiency of entrepreneurship.” There must be: the prevalence of an adventurous spirit either in men or in organizations conducive to innovations; the existence of potent incentives whatever their nature; the opportunities to reap rewards adequate to continued initiative; and provisions for training if entrepreneurship is to have sustained development. All of these elements – except the latter which does not seem directly related to our task – have been treated in some detail above. But this list is not yet complete. We have yet to consider the significant characteristics of the environment wherein the entrepreneur innovates and makes his decisions, for this too has effect on entrepreneurial action.² Professor Easterbrook (and many sociologists) believes that a consideration of the psychological atmosphere and certain other aspects of the situation in which the innovational acts take place may be of greater significance than the acts themselves.

Causation is extremely complex, and, as a result, very serious difficulties arise from divorcing the entrepreneur from the institutional setting and “psychological atmosphere” with which he has been most commonly identified. Concentration on entrepreneurial functions or “tasks” tends to a neglect of change initiated by non-entrepreneurial forms and such change is very common in economic history. The act of innovation, per se, is very often less significant historically than the structural and motivational aspects of those situations in which the innovational act takes place.³

¹ Arthur H. Cole, “An Approach to the Study of Entrepreneurship: A Tribute to Edwin P. Gay,” *Tasks of Economic History* (Supplement to the *Journal of Economic History*, 1946) 10.

² This was fully recognized by Cole in *Change and the Entrepreneur* (1949) 99. “The environment of economic and social conditions has undoubtedly affected the form and substance of entrepreneurship in the various periods of the past.”

Another student of invention, innovation, and imitation adds his agreement:

Social structure may inhibit the imitation of desirable innovations. In a class-divided society, with income distributed on the basis of caste or power rather than on the basis of productivity, there is little incentive to invent, innovate, or imitate better technicways. Jacques de Vaucanson's textile machinery inventions and innovations, for example, did not spread in eighteenth century France, which was characterized by such class and income division, while the inferior Arkwright inventions readily spread through British industry. De Vaucanson would not even have performed his work had he not been appointed inspector of the silk manufacturers. Prior to this appointment, he had mechanical interests but devoted them to the perfection of automatons.¹

We are consequently concerned here with the character of the economy and society – the parameters, the institutions and traditions, the organization, the intellectual climate, - in short we are concerned once again with the formal aspect of entrepreneurship. However, it is not our task to describe the economic institutions of any society. Rather, we are concerned with innovational activity on the level of society; that is to say, in the changes of the form of the society, due to entrepreneurship. In short, we introduce here “system entrepreneurship” (section I) which involves the entrepreneur's architectonic function in reference to social construction and organization. We shall see that the du Pont firm is an illustration of system changing (II). It is apparent that innovational activity is not always and necessarily beneficial – it may even be detrimental. This is true of business entrepreneurship but even more true of system or social entrepreneurship. Any principles formulated by ethicians to guide these activities toward the socially just must be drawn upon to become the foundation of social policy. It may be helpful, therefore, to review the

³ W.T. Easterbrook, “The Climate of Enterprise,” *Papers and Proceedings of the American Economic Association* (XXXIX, May 1949) 325.

¹ Yale Brozen, “Invention, Innovation, and Imitation,” *Papers and Proceedings of the American Economic Association* (XLI, May 1951) 243.

principles of Catholic social organization in the light of system entrepreneurship (III), and finally to examine once again the contributions of du Pont in reference to the principles (IV). It is hoped that in the process of considering the four points listed above some small contribution to the development of Catholic socioeconomic policy will be made.

I. System Entrepreneurship

Until now we have been concerned with entrepreneurship in the sense that the innovation results from an act of a businessman, that is to say from the activity of that agent who specializes in producing and exchanging goods and services privately with someone else for other goods and services and who measures the success of this activity by an accumulation of profit. This agent may be termed the business entrepreneur and his act, the business innovation. The latter may be defined as a creative act of a person guiding a profit-oriented business unit within the economic organization which changes the methods of producing, marketing, servicing, etc. There are other types of entrepreneurship that do not fit this definition. If we utilize the term entrepreneur in its original French connotation of striving or enterprising we find its meaning is not restricted exclusively to business or economic activity. Two characteristics may be mentioned to identify entrepreneurship in a general sense. First of all entrepreneurship is associated with general expansion or development; whether this be in an art field, political or social sphere, economic system, etc. Secondly, there results as an effect of entrepreneurship, rhythmic or cyclical pulsation. Schumpeter has well shown the role of the economic entrepreneur in generating economic development; Solterer has attributed these notes to entrepreneurship in general. We shall be concerned in what follows with one kind of entrepreneurship that is not purely economic. Consequently, the following is not strictly Schumpeterian.

What might be termed system entrepreneurship is a creative act which changes the social and economic organization itself; it is usually brought about by political means, although there are cases of system innovation being brought about privately, it is not profit-oriented, and is motivated by power, social reform, social justice, and the like. The agent who originates the system innovation is the system entrepreneur. A few historical examples will serve to familiarize us with this agent and his work.

a) One of the most important system innovations in the whole of economic history is described in an article by Rostovtzeff.¹ After the conquest of Egypt by Rome, the new administrators required that a man be responsible for his fiscal debts not only with his fortune but also with his body. This is an ancient device, far older than Rome. What the Romans added that was new (during the reign of Tiberius) was the collective responsibility of a group for an individual. The importance of this innovation in economic history will be immediately evident if we admit with Rostovtzeff that it: a) explains why Egypt, a land of abiding natural fertility, was laid waste; and b) that it was spread to plague the (Roman) world for centuries to come. From this beginning, traced to the action of several state administrators in Egypt, there grew a policy c) which, according to Rostovtzeff (in other places) did much to aggravate a social conflict leading in time to the disintegration of the Roman Empire. Surely this is a significant change in social and economic organization.

b) It is sometimes difficult to draw the line between a system and a business innovation. The case of Tenino's wooden money is a good example.² Tenino is a small town in the state of Washington. Its only bank was forced to close during the "Depression"

¹ M. Rostovtzeff, "Roman Exploitation of Egypt in the First Century A.D.," *Journal of Economic and Business History* (I, 1928) 337-364.

² "Wooden Money," *Bulletin of the Business Historical Society* (IX, 1, February 1935) 9-11.

(December 1931). Because of the lack of a medium of exchange, the Chamber of Commerce allowed the bank to issue its own currency. It did so; it issued the conventional bank notes but also 25¢ and 50¢ notes printed on two-ply slice-wood. This is clearly a system innovation. There developed immediately a large demand for these wooden pieces from coin and souvenir collectors. When the redemption date arrived, the Chamber of Commerce was asked to redeem only \$30 out of the \$6,500 issued. Immediately Tenino issued a second series – this time the motive was public or municipal profit. This is the best example we have yet found of a system innovation becoming an innovation motivated by profit; it became a business innovation on the level of the community.

c) There are many examples of the opposite – a business innovation becoming a system innovation. One of the most interesting cases concerns the activities of the Indian industrialist Jamsetji N. Tata.¹ Gras calls Tata's innovation the socialization of industry in India. Perhaps this is inaccurate – what Tata actually did was inaugurate a program aiming at social justice. Tata, it is interesting to note, was a Parsee, i.e. a descendant of those Persians who in the eight century fled from the Arab invasion. He was also an extremely successful businessman. He was able: to build up powerful textile companies, Empress Mills, Swadeshi Hills; highly profitable iron and steel factories; hydroelectric plants; to concern himself successfully with foreign steamship operation, hotels, insurance, and so on. As he went along building his great industrial empire, he created workers' benefits within the various companies, and moreover, transferred much of the ownership to the workers and to charitable trusts. In brief, Tata fought the spread of British Liberalism into India and replaced it with a surprisingly well-developed system of social justice even

¹ Gras, "A Great Indian Industrialist: Jamsetji Nussersanji Tata, 1839-1904," *Bulletin of Business Historical Society* (XXIII, 3, 1949) 149-151.

before the turn of the twentieth century. His work has survived to become an integral part of India's social organization. Clearly, this is an important case of business innovation becoming a system innovation.

d) We cite another case of a business innovation which resulted in a change of the economic organization. During the seventeenth century, a group of English merchants trading in the East defended themselves against the Bullionists by insisting that a favorable balance of trade should be applied to a nation's trade with all other nations combined and not just with one nation. The leaders of this group are well known: Thomas Mun, Sir Josiah Child, Sir Dudley North, etc. Whether ~~these merchants were right or wrong~~ **their arguments were economically sound or not** is not in question. ~~The point is that their arguments were to be~~ [two or three handwritten words illegible] a justification for their profitable enterprises and the result was that from these stirrings began the quest for a new economic organization based upon the new principles (yet undefined) of free trade and laissez faire.¹

Wherever we become concerned with new changes in the field of banking, we find ourselves in that boundary-less territory between business and system innovations. An essay might be written classifying the entrepreneurial activities of Amadeo Giannini, one of America's greatest banking innovators. We can do no more here than sketch a possible outline for such an attempt. Giannini was first and always a businessman. He administered his bank as he administered his produce business. This in itself was a banking innovation. He shocked traditionally-minded bankers: by promoting elaborate display advertising,

¹ Editor's note. The changes that are highlighted in the text do not appear on the official copy of the dissertation held in the Georgetown University library. They were made in Waters' own handwriting on his personal copy of the dissertation.

rather than the mere insertion of a business card in a financial journal; by selling large issues of bank stock to the general public; and by going out to his clientele offering his services. We may safely call these business innovations in the field of banking. However, the most important of innovations accredited to Giannini, and the one more responsible than any other single factor for the development of the Bank of Italy from a small neighborhood bank in the foreign quarter of San Francisco to the fourth or fifth largest banking house in the country, was system innovation. This was the establishment of branch banking in the United States: it was the vision of Giannini that branch banking would allow great possibilities for efficiency, services, and profit. Overcoming the hostility of state political officials and the Federal Reserve, Giannini succeeded in changing the banking institutions of his native state and in carving for himself the most prominent place among Western bankers and businessmen.¹

The set of illustrations cited above may act as a preface to a final illustration of system entrepreneurship. The description and analysis of the du Pont firm that follow are of greater significance because it is from them that we find a new approach to the contemporary problem of social and economic integration.

II. The du Pont Firm

The American society has witnessed in the last quarter century the birth and growth of new institution: what might be called a firm of the innovation industry. This is not simply an innovating firm, i.e. a new firm operating with a new production function or in operation to launch an innovation; rather it is a firm whose function and raison d'être it is to discover, produce, and promote public acceptance of successive innovations. The E. I. du

¹ George W. Dowrie, "History of the Bank of Italy in California," *Journal of Economics and Business History* (II, 2, February 1930) 271-298.

Pont de Nemours and Company is the only firm of this nature known to the writer to exist at the present time. We wish to examine in detail the more interesting characteristics of this unusual concern.¹

Du Pont has been called monopolistic, oligopolistic, and competitive. Unless these terms are given an exact meaning it is worse than useless to employ them in reference to any firm. For example, if monopoly is synonymous with bigness then surely du Pont is a monopoly. The government has pending six prosecutions whereby it hopes to cut it down. If by monopoly is meant the condition of a single seller and thus complete price determination, then du Pont is monopolistic. Du Pont often finds itself the only significant seller of its products even after its patent has run out. Because its products require unusually large capital demands and the highest quality of technical and managerial resources, competitors are not want to enter the field. It has even become necessary for du Pont to foster the establishment of competitors. Persons associated with the Justice Department have claimed that du Pont does this in order to defend itself against the charge of restraint of trade; du Pont claims it is in accordance with the policy of releasing its hold on a product after its development and then turning its energies and talents to new things. At any rate, the Development Department of du Pont was given the task of furnishing a competitor in cellophane. It chose Olin Industries Incorporated and set out to build “the plant for Olin at a fee, licensing it under all patents, and supplying full technical assistance.”² A similar agreement to produce sodium metal was made with National

¹ The facts cited below were taken from five articles on du Pont found in *Fortune* (October 1950), written by Lawrence P. Lessig and the staff of the magazine. The articles are titled: “Prologue,” “The Top Level,” “Markets, How They are Opened,” “Orlon, Case History of a New Fiber,” and “How to Win at Research.”

Distillers to whom du Pont supplied the complete knowledge of the process. If monopoly is defined scientifically as the production and marketing of a product whose cross-elasticity of demand with respect to every other product is small, then du Pont is for the most part non-monopolistic. For example, a change in the price of rayon and the natural fabrics linen, cotton, wool, and flax have a very great effect on the quantity of Nylon demanded.

Surely du Pont is oligopolistic. Its competition is a competition among a few large concerns to win acceptance for unique products. In no instance does du Pont compete with firms producing identically the same product except in those areas where du Pont helped establish the competitor. Product differentiation being always present, we are concerned in no way with perfect competition in the classical sense. The kind of competition found here may be called dynamic or innovation competition, i.e. the struggle of a firm to win public acceptance for a newly introduced product or service. The du Pont firm is concerned essentially with this type of competition. Dynamic competition involves the struggle between an active seller and the resisting consumer. It involves tasks of demand creation – wherein the innovating firm attempts to change the habits and tastes of the great mass of the nation's buyers. In the past quarter of a century, du Pont has successfully introduced Duco, moisture-proof cellophane, Zerone, Nylon, Freon, Neoprene, and many lesser known products against very strong resistance in each case.

These products have in common characteristics that rightfully include du Pont as a firm of the chemical industry or establish it a chemical firm. Also common to these products is the quality of newness which allows us to refer to this corporation as the first

² *Fortune*, 160.

firm of the innovation industry or an innovation firm.¹ Innovation industry may be defined as that group of firms whose function it is to market new products and produce old ones by new techniques. That du Pont does this there can be no doubt. Sixty percent of du Pont's sales come from products that were unknown outside of the laboratory a quarter of a century ago. Furthermore, du Pont expects that 60 percent of its sales twenty years from now will come from products unknown to the public today.

Although no definite statistical evidence is available, business historians have long suspected that the failures from innovating activities far outnumber the successes.² Quite often after much time, skill, and capital are expended, the entrepreneurial vision is not realized. There are three reasons for this: (a) the new product or process may not be technologically practicable; (b) the new product may not be economically feasible; or (c) it simply cannot break through public resistance. It is true that oftentimes these failures help clear the way for later successful attempts at the same effort by others. Still the loss of capital to the initiators and the economic waste to society are great. Now since the du Pont Corporation – or more generally a firm of the innovation industry – exists for the purpose of bringing innovations into being, it must bear the more numerous losses with the compensating successes. In other words, while the vision remains personal as it must always, the materialization of entrepreneurship becomes rationalized and collectivized. The du Pont method to minimize the loss is to “spread the risk over as many games as

¹ An innovation firm but not an innovating firm. The latter is simply a “new” firm in the Schumpeterian sense of introducing a new production function; the former exists to produce new production functions successively and regularly.

² Some incomplete evidence is available from Alfred R. Oxenfeldt's *New Firms and Free Enterprise* (Washington: American Council on Public Affairs, 1943) especially chapter XV, and Ernest A. Heilman's *Mortality of Business Firms in Minneapolis, St. Paul, and Duluth, 1926-1930* (Minneapolis: University of Minnesota Press, 1933) 11 ff.

possible.”¹ The loss then becomes an expense or cost-item. In this way rationalization of entrepreneurship may be an aid in increasing the number of innovations attempted and so it is a favorable condition for economic development.

Three instances are inserted here as examples of the three deterrents of success mentioned above. (a) Du Pont attempted unsuccessfully to produce Arboneld – a top grade lumbar made from slash – by means of impregnation. It cost \$50,000 just to straighten out public relations. (b) Du Pont’s odorless formaldehyde – a preservative and disinfectant – was an excellent illustration of chemical engineering but was completely unfeasible economically. Du Pont was forced to charge 55¢ or 60¢ a pound for it, which price could not sell against the 10¢ per pound odoriferous kind. So du Pont was forced to write it off as a complete loss. (c) Du Pont was unsuccessful in acquiring public acceptance of methanol – a synthetic wood alcohol. The oil companies would not buy it because it would replace their antifreeze, natural ethyl alcohol. The Corporation consequently declared a price war against the established products. Du Pont cut its price deeper and deeper but for five years it did not sell enough methanol to break even. In only one sense was this the end of methanol. A new product was introduced. It was the same chemical substance as methanol but its name was Zerone; it was attractively placed in sealed cans; and sold at higher prices. In seven more years Zerone was leading all antifreezes in sales and volume. Zerone’s success does not alter the fact of methanol’s failure. Examining both of them side by side gives added insight into the nature of market creation and consumer resistance.

This note leads us to two interesting questions. First of all, how can this attempt to rationalize and collectivize entrepreneurial activity be reconciled with vision, which is

¹ *Fortune*, 115.

essentially and necessarily personal? Secondly, what effect does this rationalization have on the profit rate? Both require several explanatory remarks.

The entrepreneur has never been completely free to set in operation new production functions. In the full capitalistic economy of the nineteenth century, his plans were subject to the approval of his banker or other fund supplier. In a socialistic society they are subject to the approval of a planning board or a department of it whose function it is to review proposed innovations. At du Pont the manager of any of the operating departments presents his request for funds to the Finance Committee.¹ Except for this (which is not a part of the entrepreneurial function) and conformity to top policies and standards, the manager is left free to plan, produce, sell, and buy in whatever manner he chooses. He possesses the facilities for research and selects projects; he decides upon techniques and processes to be employed in production and guides their operation; he encounters consumer resistance through the agency of technically trained salesmen (seven years of preparation is not uncommon); and busy at the lowest prices whether these are found in other departments or outside. Above all he is responsible for new developments. Nor is the manager of those departments whose growth has all but ceased relieved of this responsibility. For example, Explosives, which has long been a stable department, recently presented a process for manufacturing one of the essential substances required for Fiber V, a new textile. Furthermore, the manager selects his own assistants, his own divisional managers and often his own successor.

There are ten operating departments of the Du Pont Corporation. Rayon (which includes all of the synthetic textiles), organic (the dyes, Freon, etc.), and Polychemicals (the

¹ The description of the activities of du Pont's managers and research workers is taken almost verbatim from *Fortune*, 98, 132, and 170.

alcohols and plastics) are perhaps the most important. The manager of each of these ten departments may be termed a corporation entrepreneur to distinguish him from the completely independent entrepreneur. The few restrictions imposed upon this departmental entrepreneur are far outweighed by the great advantages of having at his disposal exceptional productive facilities and very talented personnel. The corporation entrepreneur has all the resources that can be mustered to facilitate entrepreneurial activity. Furthermore, the person selected to hold this position must have entrepreneurial ability. Even so, the selection of a manager with insights to recognize and encourage the potential worth of entrepreneurial talent among his employees may prove a more valuable qualification than managerial entrepreneurial talent itself. However, there are not built-in devices to assure the recognition and utilitarianism of the subordinates' talent. Whether or not the creative ability of those under him is exploited fully, depends on the manager's approval. This may be a costly deficiency. We shall discuss the possibility of a partial solution below.

Let us be assured that the du Pont Corporation is an innovation firm in the exact sense in which we have used this concept. After a du Pont product has been accepted by the consuming public, the other firms begin to produce it. Price competition comes into play and emphasis is on service and differentiation – or the improvement of the product. Du Pont observes, as *Fortune* expresses it, that returns are diminishing. More precisely, as other firms begin production and snatch a share of the created market, profits are diffused. Moreover, the prior condition of dynamic leadership becomes one of stable equilibrium and profit tends toward the minimum. When this occurs, du Pont makes no effort to

maintain a large or fixed percentage of the market. Rather, the Corporation shifts its efforts and capital to the development of still newer things. By way of illustration:

It might easily, for instance, have pressed for a larger share of rayon, but then it wouldn't have had the capital or attention to spend on new synthetics, the country would have been the loser, and the Rayon Department might not have become the company's top earner.¹

Thus far, Schumpeter's theoretical models for analyses of economic development and business cycles appear sufficient to explain the role of du Pont or any innovation firm in a contemporary economic situation. After the innovation is introduced, profits and interest emerge. They continue to increase at a decreasing rate due to the appearance of additional firms to exploit the innovation. In the problem before us, however, two assumptions are no longer appropriate, viz. the assumption: (1) that credit is created to finance innovations; and (2) that the firm operates to maximize profit.

Concerning the first, we recall that du Pont is an established institution. For thirty years it has retained a 10 percent return on investment as its goal. Out of this, it has directed the business, paid the stockholders, and expanded. Consequently, this established innovation firm need not enter the money market – past profits or savings supply the financial needs. We must ask ourselves what effect this aspect of collectivized entrepreneurship has on the nation's average rate of profit? Because there is no measure of the national profit rate and because the interest rate is no longer a relative measure of the increase or decrease of aggregate profits, the question cannot be answered for the specific historical case before us. However, some general information is derived theoretically. Because the credit created to launch an innovation is a necessary condition of profit

¹ *Fortune*, 98.

generation, the average rate of profit will be lower in proportion to the amount of savings employed in the place of created credit.

Concerning the second assumption mentioned, the du Pont concern does not operate to maximize profit. It adheres quite strictly to the policy that a 10 percent return on investment be obtained. If the return of any department varies in either direction, the manager must explain it. If the revenue is higher than the permitted percentage it may well result in the reduction of prices. Of course this too will have the effect of reducing potential aggregate profits throughout the system.

All of this conforms to the Schumpeterian judgment that a zero rate of profit and interest must accompany a condition of completely rationalized entrepreneurship. It would be an unwarranted deduction, however, to conclude that the activities of du Pont necessarily lead to this condition. In fact due to the nature of the projects that du Pont selects, it may well be that the effect is contrary to what we might expect. The Corporation consistently restricts its activities to those chemical jobs that require its large capital, technical, and managerial resources. "It must have developments leading to big volume, for the scale of its operations is geared to mass markets."¹ These are the projects that the unestablished or "new" firm finds most difficult to undertake. Consequently, they might otherwise be lost to the economy or greatly delayed coming into being. Furthermore, except in rare instances, du Pont's products are not final consumer goods. For example,² the Nylon in a pair of ladies hose cost only about 12¢ or 6 percent of the finished product; the anti-knock agent in gasoline, tetraethyl lead, costs the oil companies only a fraction of a

¹ *Ibid.*, 162.

² These examples are all found in *Fortune*, 95.

cent per gallon; Freon, the refrigerant gas used in all but one make of refrigerator is worth about 25¢; the cellophane that envelops thousands of products accounts for a very small portion of the cost of each. Duco and Zerone are important examples of the rare instances that du Pont markets final products: even so the former accounts for about \$8 of the price of a new automobile; the latter was not originally meant to be a finished consumers' product but this was the only way it could be successfully marketed. In short, a typically new du Pont presentation will almost invariably promote outside economic activity and bring new firms into existence to utilize the product or finish the process. Very often these are small enterprises that require created credit. So du Pont generates profit and increases interest payment throughout the economy after all but it does so for the most part indirectly.

The concept innovating firm does not connote a kind of firm. Rather it describes the initial stage in the life of a firm that comes into existence introducing an innovation. It is an enterprise in its formative stage. In the course of time, the firm becomes an established or "going" concern and must then continually scratch for minor improvements and new technique against competitors. For example, the Ford Motor Company was an innovating firm before World War I when it operated to realize the vision of supplying the great mass of American people with a cheap four cylinder car. At present its products are established and the concern aims at retaining or enlarging its share of the automotive market. The twenties witnessed the transition from the first stage to this last – completing stage. A pure innovation firm is not permitted the ease and stability of a completing stage. It must periodically reevaluate its older products with the view to possible discontinuance of their production. The Du Pont Corporation is stopping the production of black powder – the

product that founded its business – and sulfuric acid. The Corporation has closed all of the black powder plants but one; it is closing its sulfuric acid plants. This is not easily done; “getting out” is one of the most difficult tasks confronting the innovation firm. When a department possesses some earning power a strong resistance is built up against closing it out.

To get out of a business is often more difficult than to get in. The divisions and people involved build up a vested interest and marshal endless reasons for not getting out.....Where a sizable group of plant workers are involved, it's a real problem. In any case closing out can't be done quickly, but du Pont's sights on earnings are high and it is already beginning to clamp down.¹

The innovation firm is in some ways a hybrid institution with characteristics in common both to the “new” firm that innovates and to a government agency for the development of large-scale ventures. Like the former, it is a private institution operated with an efficiency and rationality that only strict adherence to the principles of cost accounting calls forth. On the other hand, like the latter it is capable of undertaking very large-scale projects. Several advantages of the innovation firm over the public agency are immediately apparent. For example, it conforms well to the principle of subsidiarity that requires that a large organization may not take upon itself a social responsibility that can be handled as efficiently by a smaller one. We shall say more of this principle later. But what concerns us primarily here is another advantage: the private institution is obviously better qualified to solve the “closing out” problem. Political pressure from vested-interest groups – the farmers, unions, business, doctors, etc., - makes initiation of public enterprise difficult; but makes the termination of such activity that is initiated almost impossible. While vested-interest is strong in the private sector and “closing out” shall always continue

¹ *Fortune*, 166.

to be a chronic problem to the innovation firm, yet the conclusions drawn from profit and loss statements are more highly respected and are an aid in counteracting this resistance.

By way of summary let us list some of the characteristic of the Du Pont Corporation that we have selected from the *Fortune* Study. They may be considered as forming a descriptive definition of what has been termed a firm of the innovation industry or an innovation firm.

1. The innovation firm is dynamically competitive. The Du Pont Corporation expresses it “competition as innovation.” Dynamic or innovation competition refers to the struggle of those select business organizations who attempt to acquire a profitable income by employing new technical processes or introducing new products.

2. The innovation firm gets its name because it operates to produce new production functions successively and regularly. The innovation industry is a more general concept used to designate all innovation firms. Because du Pont is the only such firm in existence at present, it is the only (or first) firm of the innovation industry.

3. Several difficulties are common exclusively to innovation firms: (a) the President of du Pont estimates that perhaps one in twenty of the projects started materialize and become profitable. Innovation firms are faced with a “bad statistical situation.” New firms that begin life by innovating are also faced with it but they survive or succumb as a result of a solitary effort and grow into a more comfortable condition. The innovation firm cannot allow itself the serenity of this completing stage. (b) A second difficulty involves the closing out of departments as a product reaches its completing stage. Invariably strong vested-interest arises to resist the termination of maturing activities and the transfer to new ventures.

4. The managers of the various departments of the Du Pont Corporation have all the facilities man can prepare to encourage entrepreneurial activity. Also present is the very valuable pressure from the “top level” which is almost always as valuable as it is uncomfortable. However, the same facilities and opportunities are not generally available to employees and outsiders. The possibilities of removing this deficiency will be discussed below.

5. Finally, the innovation firm is an established concern in the sense that it is not new – it does not come into existence with every innovation. It does not require that credit be created with every new development. This has a dampening effect on profit generation unless – as is the case with du Pont - these innovations might not otherwise be launched. Also, though it is possible that profit generation does not accompany the original spark that sets off the economic development, yet it does accompany the derivative and the secondary innovations that result.

III. Basic Principles of Social Organization

What we have learned from du Pont and have generalized into a set of concepts including the innovation firm, dynamic competition, and the corporation entrepreneur may be useful when referred to the basic Catholic principles of social economic organization. This will be attempted in section IV. But it is necessary first to inject some remarks about these principles. They may be conveniently reduced to three: the principles of social ordering, corporatization, and subsidiarity.

A. Principle of Social Ordering

The first two are found in Father Pesch’s famous definition of the economic system of solidarism.

Solidarism, generally speaking, is the social system that makes valid the amalgamation of men as such, and as members of the natural communities of family and state, and advocates at the same time the free development of a legally well-arranged, cooperative, representative, and corporate association according to rank and vocation that suits the historical requirements.¹

Taking “well-arranged” to be a key term in the definition, the first of these principles may be stated as the need for social justice in the sense of organizing to establish a well-arranged or ordered economic community. The order then is essentially the Latin or Thomistic “ordo” – unity in well-arranged multiplicity.

(This) unity arising from an apt arrangement of a multiplicity of parts does not merely mean a multiplicity of different things; aside from diversity and multiplicity it includes arrangement whereby equal things are united and unequal things combined to a higher unit.²

In Solterer’s words, this is the principle that demands the presence of that...”virtue whose object is organization for the common good. We notice that this is the virtue which is concerned with insuring integrability at least locally.”³

A second key term in Pesch’s definition is “corporate association.” This gives rise to the principle of corporatization. We shall discuss this below but first we wish to recognize two aspects of the first social ordering, that specifically concern entrepreneurship. They are the social arrangement for security of entrepreneurial activity and for entrepreneurial responsibility.

¹ This is the definition of Heinrich Pesch, S.J. quoted by Oswald von Nell-Breuning, S.J. in his *Reconstruction of the Social Economy*. Translated by Bernard W. Dempsey, S.J. (Milwaukee: Bruce, 1936) 208.

² Nell-Breuning, *op. cit.*, 224.

³ Josef Solterer’s unpublished “Note on Lisman’s Econometrics and Thermodynamics,” 8.

1. The Securities

W.T. Easterbrook's great contribution to the analysis of the entrepreneur is his examination of the security essential to the existence of free entrepreneurial action. The entrepreneur strives only in a highly selective environment; an environment "in which various security elements have been combined." Drawing on Mill's definition, this security may be looked upon as the completeness of the protection which society affords to the entrepreneur. Easterbrook views this condition from four aspects, entrepreneurial, social, ethical, and political. The reader may judge whether it is useful to add security of standardization.

a. Entrepreneurial security allows the businessman freedom to take ordinary and legitimate risks of doing business.

Where prospective returns to enterprise are not such as to compensate for risks associated with threats to entrepreneurial security, then entrepreneurship languishes and the "corporate" form (i.e. authoritarian form) of business organization appears to be the logical (only) form of organization – a point sometimes overlooked in studies of medieval guilds, trading leagues, regulated companies, and joint-stock organization.¹

b. Social or want security is security against want "for that part of the population which matters politically." The problems arising from social security are particularly acute today in some areas because

...the so-called "masses" now count in national policies as they have never counted before, and slogans of social security or full-employment cannot be suppressed or ignored as sporadic, ill-organized revolts once were.... There are very dangerous implications for entrepreneurial freedom in policies which define social security as the great and overriding objective of reform rather than entrepreneurial security as the logical starting point.²

¹ Easterbrook, "The Climate of Enterprise," 328.

² Ibid., 329.

Berdyayev is one who enthusiastically supports the increase of want security.

There are a number of respects in which the function of the state ought even to be broadened, for example in economic life. It is not to be permitted that there should be hungry people, people oppressed by want, and unemployed; the exploitation of man cannot be permitted. To prevent these things should be the principal purpose of the state.¹

c. Ethical security exists if the psychological atmosphere within the community is favorable to entrepreneurship. It rests

on the presence of social sanctions sufficiently strong to endure general acceptance of entrepreneurial activities as “good.” A healthful “enterprise” environment is out of the question without a popular faith in enterprise. And it is highly important in this connection that people in general feel that they have a stake in, and form an integral part of, the system.²

d. Political security is the protection afforded the entrepreneur by government. The protection may be external or internal. The form is defense against external enemies, against violence and hostility of all kinds. It must also afford protection against threats for these alone if of long duration will destroy enterprise. Internal political security and stability is Smith’s “order and good government, and along with them, the liberty and security of individuals.” Threats to this security – such as anticipation of tyrannic or arbitrary rule – may destroy as quickly as any foreign danger.

In Britain today there is a general feeling that pioneering does not pay, that everyone is working in a confined space, which is almost impossible to enlarge, that foresight and forethought are likely to be rendered useless by sudden and unpredictable acts of the state.³

It might be noticed that the four securities required of society may be reduced to four qualities a society must possess if it is to be rich in entrepreneurial activity: freedom,

¹ Berdyayev, *Slavery and Freedom*, 150.

² Easterbrook, “The Climate of Enterprise,” 329.

³ John Jewkes, “Socialism’s Legacy to Churchill,” *Fortune* (December 1951) 81.

security (in the restricted and popular sense), responsibility, and stability. It would be interesting to draft the “good” society with these qualities as the four cornerstones.

Gras has concerned himself to a great extent with the problem of security for the entrepreneur.¹ Business leadership, he says, insists on doing things for society: initiating new things or doing old things in a better way. Society has come to expect this performance. In turn, he says, the entrepreneur has the right to expect certain considerations. He has claims upon society not unlike the claims of the soldier, priest, scientist, and politician. Surely, this much is due him “on the ground that our material welfare is founded on the businessman’s administration.” These claims, which Gras lists, are termed the “rights of the businessman.” There are six and they fit into the classification above in this manner: The first three are entrepreneurial securities. The businessman has a right 1. to profits where he has invested wisely, 2. to interest where he has loaned judiciously, and 3. to salary where he has administered or managed. 4. He has a right to “police protection for his property and operations, as a partial return for the taxes paid” – a political security. The last two are very necessary components of ethical security. 5. There must be at least an elementary general understanding by the public of business administration – its policy formulation, management, control and investment. Finally, 6. society must be constructively critical to condemn the undesirable and applaud the useful, in short, social estimation must be intellectual not emotional.

Illustrations of the presence or absence of these various securities are numerous in the literature of economic and (particularly) business history. The several that follow appear especially interesting:

¹ Gras, “The Social Implications of Business Administration: An Introductory Statement,” *Bulletin of the Business Historical Society* (XVII, February 1943) 2-5.

The history of the harbor of St. Malo stands as a striking example of commercial and entrepreneurial success resulting in a large measure from strong political security. From the late Middle Ages until the nineteenth century, St. Malo was a busy port with an active commercial life. Fishing of course was one of the great activities of Malouin sailors and ship-owners; “especially fishing for cod in the distant seas. They were accustomed to venture afar; and one of their captains, Jacques Cartier, was the founder of Canada.” The manufacture of linen had developed in Brittany in the sixteenth century and so exportation of this fabric notably to Cadiz was another of the activities. It is interesting to note that St. Malo’s long history of commercial achievement was possible even in the face of very serious handicaps: the city had no means of close communication with the rest of France by river or canal; Rennes was the only important city in the vicinity and freight charges between the two places was extremely expensive; it had no very rich agricultural hinterland; it had no important industry outside of the manufacture of linen. Yet the port of St. Malo flourished and endured. This is accounted for to a very large extent (on the authority of a very respected scholar) by strong military protection.¹

The rise of business enterprise in the American Revolutionary era is accounted for by the introduction of political, entrepreneurial, and ethical security. Doctor East² in attempting to find the reason for the sudden in-of big business and corporate enterprise after the Revolution discovered it could be explained by the removal of the obstacles that had formerly hindered this enterprise. The main factors impeding the advance of business

¹ Henri See, “The Ship-Owners of St. Malo in the Eighteenth Century,” *Bulletin of the Business Historical Society* (II, June 1928) 3-6.

² Robert A. East, *Business Enterprise in the American Revolutionary Era* (New York: Columbia University Press, 1938).

development were “the lack of leadership for large undertakings, restrictions imposed by British mercantilist policy, and hostility on the part of many colonials toward mercantile activities – an attitude which is inevitable in any agrarian population.”¹ But the Revolution changed all this: the Imperial restrictions were thrown off, old traditions and attitudes were weakened, and interest favorable to business gained a political victory over the agrarian opposition. The net result was rapid development commercially (trade was opened with Sweden, France, Holland, and expanded with the West Indies) and industrially (the new nation began earnestly to supply clothing, food, etc., for its people).

One lack of ethical security for entrepreneurship has come from what may seem an unexpected source – at least so claims Professor Gras.² Gras believes that “for over a century classical economics has been a leaven to socialism in the sense that if the socialists wish to get rid of the business man they may well do so “for it has never been clear that he has been particularly useful anyway;” the treatment by economists leaves no room for the business man. Evidence given to substantiate this view includes – among other things: the lack of recognition of management as a dynamic, guiding, and controlling factor; the emphasis on distribution rather than on the cooperative effort to produce; the erroneous assumption that labor produces all wealth; the influence of the sun (Jevons), and the influence of Venus (Moore) in accounting for business cycles.

¹ Ralph M. Hower, “Review of East’s *Business Enterprise in the American Revolutionary Era*,” *Bulletin of the Business Historical Society* (XIII, 1, January 1939) 14. We notice this same lack of ethical security in the agrarian society of the Confederacy. Speaking of the inability of the South to supply its people with ordinary necessities during the war between the states, Fletcher Pratt says: “It was not that the South lacked the materials or the latent ability to produce these things, but there was no social pressure on anybody to get them produced. In fact, the social pressure was in the other direction. A man who started a salina or a nail-factory became, ipso facto, an “engrosser,” a profiteer, and socially impossible.” *A Short History of the Civil War* (New York: Pocket, 1951) 173.

² Gras, “Behavior of Businessman in a Changing World: Rise of Business Statesmanship,” *Bulletin of Business Historical Society* (XXIII, March 1949) 37-8.

A systemized and widespread standard of weights and measures, of money, information and communication of knowledge, accounting, etc., may be considered as a part of internal stability and so internal political security, or else may be mentioned as an addition to Easterbrook's four categories and designated (say) the security of standardization. The arbitrary and localized systems of weights and measures during the Late Middle Ages may be cited as illustration of the lack of this type of security. A treatise on banking 1481 in Florence included "said lists customary in this region and in other lands." These lists showed

...the diversity in all sorts of measurements which existed by stating the number of pounds equivalent in Venice, Perugia, Bologna, and other cities to a hundred pounds Florentine weight. In common with other cities, Venice it appears, had two systems. Copper, lead, tin, wool, cheese, pitch, turpentine, and sulfur, sold by heavy weight, while almonds, soap, sugar, cinnamon, incense, indigo and "other spices" went by light weight....Alexandria....had three systems of weighing.¹

Or concerning information or the communication of knowledge, it is evident that the data on prices, quantities, costs, and marketing possibilities today is infinitely greater than that of centuries ago.

The medieval merchant or even his counterpart of the early 1800's operated as a man purblind. He bought when he had little assurance of prices in his purposed market of sale; he sold often without assurance that he would not lose money in getting his funds back home; except with "venture accounting," he could not be sure that he was richer one New Year than the New Year before; etc.²

The New Deal Policy of the thirties may well be considered an anti-security policy for entrepreneurship. In seeking to establish and strengthen want security and to restore

¹ "A Medieval Manual on Banking" *Bulletin of Business Historical Society*, (III, January 1929) 2.

² Cole, "Entrepreneurship and Entrepreneurial History: The Institutional Setting," *Change and the Entrepreneur*, 101.

internal stability it disrupted or weakened entrepreneurial and ethical security. This campaign as explained by Schumpeter, may be summarized as 1. an attack on investment opportunity and 2. an attack on business per se. The first included the special surtax on undistributed corporate income ranging from 7 to 27 percent.

...The measure may well have had a paralyzing influence on enterprise and investment in general. The actual presence of accumulated “reserves,” and the possibility of accumulating them quickly, strengthens the position of a concern with respect to the risks and chances of innovation and expansion which it confronts.¹

Also, that part of the labor program that forced up wage rates may have had some depressive effective on investment opportunity. The course of wages during this period was one of the factors that accounted for industry’s failure to repair its damaged financial structure. Furthermore, in the field of public utility development, investment opportunity was prevented from having its “normal effect,” not so much by what was actually done, but by the blanket threat of expected competition from federal and municipal power plants. The second, the attack on business per se, compromised little more than threats, anticipations, and a social atmosphere hostile to large-scale business. But this was as damaging to general investment opportunity as unfavorable legislation would have been (cf. the marginal propensity to invest). This was so because economic development in the United States is largely the results of the operations of big business – “the result of work done within a number of concerns at no time much greater than 300 or 400.”

Real or supposed drifts and trends may count as much or more than specific ones, in creating the psychic environment in which the nation’s work has to be done.²

¹ Schumpeter, *Business Cycles*, II, 1040. See also 1040-7; and *Capitalism, Socialism, and Democracy*, 386-88.

² *Ibid.*, II, 1946.

2. Social Responsibility

Clark has shown that the notions of organized economic groups have brought to the fore an overshadowing economic principle that had little recognition in the nineteenth century:

....the principle that the degree of freedom that can persist is determined and measured by the degree of responsibility with which group power is exercised.¹

Surely this is as valid in reference to individual economic activity as it is to group activity. This is what is meant when we say entrepreneurial freedom requires responsibility. It is a moral principle notwithstanding Clark's belief that it is "also a statement of objective cause and effect, having as much claim to scientific standing as many traditional 'economic laws'." Like all moral obligations it is most difficult to execute and retain for it requires a spiritual awakening. This is the keynote of Berdyaev's Personal Socialism, wherein the personalism involves freedom and the socialism security. The great problem that lies at the roots of social life is to find a way for the two to coexist harmoniously.

The fundamental contradiction in my thinking about social life is bound up with the juxtaposition in me of two elements – an aristocratic interpretation of personality, freedom and creativeness, and a socialistic demand for the assertion of the dignity of every man, of even the most insignificant of men, and for a guarantee of his rights of life.²

Half of the problem, he claims, is solved by extending the state's role in economic life. Far more difficult is the other part – the recognition of responsibility in leadership. The leaders in society are its aristocracy; every man should strive to become an aristocrat for this

¹ John Maurice Clark, "Free Enterprise and a Planned Economy," *The Christian Demand for Social Justice*, edited by Bishop William Scarlett (New York: Signet, 1949) 51.

² Berdyaev, *Slavery and Freedom*, 9.

entails the great Christian ideal of rising above the masses. “It is precisely the proletarian as such that a social revolution ought to destroy.”¹ But having accomplished this the leader is entitled to no rights or privileges; rather is given an obligation of service.

The freedom of personality is certainly not its right; that is a superficial view. Freedom of personality is a duty; it is a fulfillment of vocation, the realization of the divine idea of man, an answer to the divine call. ...It is precisely slavery to which man lays claim as a right. Freedom ought not to be a declaration of the rights of man; it ought to be a declaration of man’s obligations, of the duty of man to a personality, to display the strength of the character of personality.²

Furthermore, the ranks of the aristocracy are always open to anyone who will accept the commission or readiness to come down from his level to benefit the masses, to display the true marks of aristocracy, self-sacrifice and magnanimity.

In short, as far as social ordering in behalf of the entrepreneur is concerned, it is necessary: (1) that the set of securities or protective safeguards for entrepreneurial activities be assured; and most important of all and most difficult to attain (2), that full recognition be given by the entrepreneurs themselves to the need for social responsibility.

B. Principle of Corporatization

Another key term in Pesch’s definition of solidarism is corporate development. The advocacy of corporate organization and the recognition of the validity of the principle of corporatization is at least as old as the German Corporate Movement itself which arose almost immediately after the French Revolution.³ It may be found useful for our purposes to trace this movement briefly.

¹ Ibid., 177. See also 9-11, 48, 178-80.

² Ibid., 48.

The Revolution acted as a catalyst for German reaction against French atomism and individualism. The thought of Rousseau and others that the general will achieves its purest expression when all citizens confront the state as individuals and not bound together in lesser associations became law with le loi Chapelier in 1791. This law made all combinations illegal. Fichte was the first important German to reintroduce into social and political thought the need for social strata between the state and individual. According to him a sphere of free activity should be apportioned “among the three medieval (and “natural”) estates (Stände): the estates of agricultural producers, artisans, and merchants.¹ But Fichte did not reserve a place for the Corporation itself. The need for corporations in the German sense of vocational groups chartered by the state was recognized by Hegel. The functions of the Hegelian corporation are manifold: the corporation shall defend the vocational interest of its members; provide training as well as charitable aid to those in need; assure each member a secure livelihood with an accompanying just wage; limit each individual ambition in the pecuniary sphere, thus bringing “this so-called natural right of acquisition” within reasonable bounds; etc., etc. In general then the corporation would act as a second family to its members with the overall purpose of providing the ethical man with a universal activity that can stand above his private ends.²

Perhaps the greatest figure in the whole history of Corporatist thought was the Bishop of Mainz, Wilhelm Emanuel, Baron von Ketteler. His solution to the great social problem of disintegration of economic independence among skilled workers was the

³ Ralph Bowen’s *German Theories of the Corporate State* (New York: McGraw-Hill, 1947) is a short but excellent history of this movement. The references to the work of Fichte, Hegel, and Ketteler were taken from this book.

¹ Bowen, op. cit., 26-31.

² Ibid., 31-98.

complete inner conversion of all men to the true political and social wisdom embodied in Christianity. His explanation of the principle of corporatization is thus secondary but significant. It is necessary according to the Bishop to inaugurate a universal scheme of labor organization, the fundamental unit of which would be the corporation. This labor organization would not aim to promote the class interests of the workers; on the contrary, the corporative bodies within the organization would discourage the war between the employer and the worker and seek peace on equitable terms between the two. The bodies which make up the labor organization must contain the elements of: naturalness; realism; morality; corporatism; and subsidiarity. That is to say, the groups: 1) must grow out of the nature of things, out of the character of the people and its faith; 2) they must have an economic purpose, not subservient to utopian dreams; 3) they must have a moral basis; 4) they must include all of the individuals of the same vocational group; and finally (5) they must possess self-government to the extent practicable.¹

Thus far three suggestions as to the significant social organization between the individual and the state have been offered: Fichte's organized social classes, Hegel's corporation approximating the medieval guild, and Ketteler's corporate organization which is similar in structure to the modern labor union. By no means did the contributions of the German Corporatist thinkers stop with Ketteler, however, we may say that most social organizations suggested since may be classified as types of one of these. They include, in part, the varieties of organization suggested by von Gierke, Stoecker, Rathenau (a type of cartel corporatism), Hitze, Pesch, and Nell-Breuning. All of these without exception are

¹ Ibid., 79-90.

on the level of the industry and show great progress in the development of the means for social reorganization on this level.

Consideration of the possibilities of applying the principle of corporatization on the level of the firm – in the sense that the independent firm becomes the vocational group itself – has unfortunately been neglected.¹ It is in this respect that the evidence of du Pont as an innovation firm may be particularly helpful. Of course, this is not to deny the presence of corporatization on the level of the firm or lower in some other sense. Belgium, for example, has established by law that a Labor-Management Council be instituted in every plant employing more than fifty people. Each council, which is composed of representatives of labor and management elected by secret ballot, has full power in the internal social affairs of the plant.² These include all problems and ideas that, it is felt, will help the plant to become a true community. They include working conditions, health measures, and the like, as well as the presentation to all workers a detailed report of the financial position of the firm. Concerning the latter, the firm is obliged legally to make known to every member of the organization the statement of profit and loss, and production every three months.

Students of the Belgium experiment have praised it. They join with the Belgian employers in claiming that these groups have helped greatly to bring about a more cooperative spirit on the part of the laboring man. Nevertheless, this method of corporatization is unsatisfactory in at least two essentials. First of all, the councils are not true vocational groups. Regardless of the admirable desire to convert the plant into a true

¹ Not completely, however. It has been discussed at Georgetown. The firm as vocational group is implied in Josef Solterer's "Concerning Profit, a Dilemma and a Way," *America*, July 24, 1948.

² This information and what follows was acquired in part from Father E. Clarke's talk, "The Belgium Experiment," presented to the Catholic Labor Welfare Group in Baltimore, March 1950.

community, we cannot fail to observe the obvious and important influence of the idea of class struggle between labor and management. The workers are more sympathetic to their vocation as a wage-earning laborer than to their vocation as an associate of a particular independent business enterprise. To acquire genuine corporatization on the level of the firm requires loyalty to the firm rather than to any “estate” or class. To emphasize that this is not what is sought primarily in the Labor-Management Councils of the Belgian Experiment we need only mention that the legal structure of Belgian economic organization calls for the establishment of a council, not in each firm but, in every plant employing fifty or more employees. Belgian corporatization is unsatisfactory, secondly, in that the economic reorganization does not allow adequate independence to the firm. Belgium has impressive cartel-like bureaus on the national and industry-wide level to affect – even determine – profits, prices, and wages.

C. Principle of Subsidiarity

The aim of independence for subsidiary vocational groups in society is clearly evident in the third principle of Catholic social organization, the principle of subsidiarity.

Just as it is wrong to withdraw from the individual and commit to the community at large what private enterprise and industry can accomplish, so too it is an injustice, a grave evil, and a disturbance of right order for a larger and higher organization to arrogate to itself functions which can be performed efficiently by smaller and lower bodies.¹

Although a central governmental authority is necessary, yet to conform to this principle of subsidiarity: (a) the instruments to carry out this authority should be corporative organizations which would have immediate jurisdiction over their respective spheres; and

¹ Pius XI, Pope, *On Reconstructing the Social Order* (Chicago: Outline Press, 1947) paragraph 79.

(b) the corporations or groups should have full power to make decisions and to plan in all cases that can be handled efficiently and adequately by them.

In summary, the three principles of economic organization require respectively: that (a) the economy be well-arranged and organized for the common good (social justice); that (b) there be encouraged and fostered vocational groups whose members share the feeling of natural attachment and fidelity analogous to the devotion one feels for his family, parish, etc., (corporatization); and (c) that these groups be independent or self-governing even though they are found on a level lower than that of the centralized authority (subsidiarity).

IV. The Principles and du Pont

A system entrepreneur acts in some ways to change the form or systematic structure of society. The du Pont Corporation, as an innovation firm, is an illustration of system entrepreneurship. The task that lies before us now is to determine whether or not this “new” economic institution is of any value to us in our attempt to formulate social policy according to the three principles.

Let us begin by postulating the validity of the judgment that economic reality is dual. There are what we have called progressive elements in society that lead to or bring about changes. On the other hand, there are conservative elements – or more accurately equilibrating tendencies – that give resistance to any effort to change and cause a regression back to the previous condition in the face of changes. The evidence that this assumption is universally valid is not substantiated beyond all refutation. There is empirical evidence of its presence, however, in all sets of phenomena, whether physical, ecological, or social. Furthermore, it has been implicitly conveyed by many respected

students of reality. Compare the illustrations selected in the last pages of the Introduction and Chapter Three. We have selected two additional illustrations for mention there.

In an article concerning the possible relationships between the theory of economics and thermodynamics, Mr. Lisman notices the two contrary types of factors – those of change and those preserving the status.¹ He reiterates the common observation that in every closed system entropy always increases and tends to a maximum value – more appropriately the system tends to a similar condition of equilibrium. His problem is to determine the extent to which this second law of thermodynamics holds in the world of phenomenon caused by human activity. This is particularly pertinent in view of Jeans' conclusion that it would seem reasonable to define life as being characterized by a capacity for evading this law.² His problem is not solved but the conception of an interplay of the two species of factors is evidently conveyed.

Harrod has noticed the significance of the interaction of progressive and conservative factors in reality. He points to the “Cambridge (University) civilization” wherein the balance is well exemplified. Furthermore, Harrod claims that Keynes was in part “an expression of this Cambridge civilization, both in its stability and self-confidence and its progressiveness.”³ Keynes himself was a disrupter – a system entrepreneur – yet, the great man never lost sight of the importance of equilibration.

¹ Lisman, “Econometrics and Thermodynamics.” *Econometrica* (XVII, 1, January 1949) 60.

² Note Marshall's remarks: “...the part which nature plays in production shows a tendency to diminishing return, the part which man plays shows a tendency to increasing return.” “...the two tendencies.....press constantly against one another.” *Principles of Economics*, 318-9. We are not implying the validity of these remarks – just the fact that Marshall notices such a dichotomy.

³ R.F. Harrod, *The Life of John Maynard Keynes* (New York: Harcourt, Brace, 1951) 3. Stability and progressiveness were underlined by this writer to emphasize what is pertinent to our discussion.

He continued to value those elements in our civilization which he had been brought up to value as a boy. Just because he was so quickly aware of new forces which might serve to disrupt this civilization, he felt how urgently needful it was for us to adapt ourselves without delay to the changes proceeding. If time were wasted much might be lost beyond recovery. His mind was constantly seeking new methods of accommodation, new recipes.¹

The two elements are not in opposition in the sense that one is desirable and the other is detrimental. There seems to be an almost natural opposition which results in tempered (i.e. non-explosive) development. Social policy in its most general form consists in augmenting or conditioning any deficiency of one or the other. Consistently throughout the history of proposals for social policy, one or the other of these complements has arisen as undesirable. Manchester Liberalism, perhaps, may be considered as a set of policies that refuses a place for stabilization, personal security, and other conservative factors. At present, Easterbrook's remark that "the straightest and perhaps (the) only road to social security is via entrepreneurial security"² is in this vein for he implies that social security follows automatically from entrepreneurial security. This may be a Neo-Schumpeterianism in the sense of a monistic (only progressive) approach to contemporary problems emanating from what might be called the "cult of the entrepreneur." There are also monistic approaches from the other side which represent the very popular modern quest for security and stability. Neo-Keynesianism with its advocacy of full employment fits this description.

It may be true that in our age the more difficult work lies in preserving the opportunities for progress. Now that the masses are important in demanding security there

¹ Ibid., 4.

² Easterbrook, "The Climate of Enterprise," 329.

is a danger that entrepreneurial security; i.e. the protection afforded the entrepreneur to act freely will be neglected in favor of social security or security against want. This is expressed clearly by Davis who also recognizes the complementarity of the elements.

If progress was the watchword of the nineteenth century, “security” is currently that of the twentieth century.....How to have both economic progress and economic security promises to be the great riddle of our time. Obviously, we do not want one to the exclusion of the other. We still talk, in America at least, about a goal of economic abundance as well as of security. But how far can we assure security and not stifle progress, the creator of abundance?¹

The difficulty in preserving the opportunities for development have mounted due to the hostility of the public toward business entrepreneurs and profit, but also due to the very increase in size of the economic community. It seems evident that there is some basis to affirm the validity of the stagnation thesis. Few will doubt that the economies of France, England, and the United States are at a point on their growth curve where the rate of growth is decelerating. Even if this should prove temporary, the volume of new investment needed to continue the high rate of growth of the past is much greater than it was a hundred years ago – even twenty years ago. Assuming that national income adjusted for price changes is a valid measure of economic size of a nation, then the economy of the United States today is more than three times the size of that in 1929. It is easily recognizable that a new investment of \$1000 in 1929 had at least three times the effectiveness in respect to growth than did a comparable new investment twenty years later. Since this was recognized in principle by Daniel Bernoulli as early as the first half of the eighteenth century, it is quite surprising that it is not commonplace knowledge today. As applied to economic development the principle may be expressed: in considering

¹ Hiram S. Davis, *The Industrial Study of Economic Progress* (Philadelphia: University of Pennsylvania Press, 1947) 1-2.

additions to national income resulting from incremental additions of new investment, it is important to include as a criterion of measurement the amount of the national income as well as the size of the increment.¹ Consequently, because of the present large size of the American economy, the aid of great and penetrating innovations is needed if economic development is to continue as it has in the past.

But these innovations are available; the Age of Capitalism is ready to enter the Kondratieff of atomic energy. However, the gradual change in institutional structure must be recognized. The cost of financing significant innovations is much greater than formerly: the funds required are no longer recorded in thousands of dollars but rather in millions. In fact, in 1950 the du Pont Corporation spent \$50 million on research plus recently dedicating a new Research Center in Wilmington that cost \$30 million. In the face of all this it does not appear likely that we can depend on the small individually directed “new” firm to promulgate the influential innovations of the future.

Large-sized innovations and the new investment that is associated with them are more readily realized by means of the innovation firm. A new firm coming into existence is greatly handicapped by the heavy capital requirements. As long as the innovation firm persists, large-scale innovational activity is possible. Consequently, the innovation firm – for which du Pont is responsible – assumes some importance. As we mentioned earlier, no institutional structure can assure entrepreneurial activity because the source is spontaneous, personal, and individualist. However, given entrepreneurs, the innovation

¹ This is a modification of Robertson’s statement: “The central idea (of Bernoulli’s analysis of utility)...is that, in considering additions to total satisfaction, resulting from incremental additions to one’s wealth, it is important to include as a criterion of measurement the amount of one’s wealth as well as the size of the increment.” Ross M. Robertson, “Mathematical Economics Before Cournot,” *Journal of Political Economy* (LVII, December 1949) 524.

firm becomes an adequate fulfillment of the requirements for progressive or developmental elements of social policy.

Of course, the innovation firm as actually observed at du Pont is not without certain deficiencies in matters of detail. We have mentioned one above: the managers of the various departments – who almost always possess entrepreneurial talent – give their approval or disapproval to the entrepreneurial visions of their employees. In other words, the manager is judge as well as entrepreneur. Schumpeter has clearly shown that these two functions are independent and must remain separated.¹ This deficiency could be eliminated by the establishment of what might be called a “Committee on New Projects.” The Committee, consisting perhaps of an engineer, a cost analyst, and a market specialist, would judge the worth of new ideas presented to it by employees, as well as persons not associated with the corporation. It could closely approximate the banker in this respect. Of course, an essential difference between the two must remain: by its nature, the Committee cannot accept the financial responsibility for its decisions in the same way the banker does. Otherwise, it may perform all of the functions of the banker as judge of innovations. Most of all, it is important that it strive for independence of personal association with the pleader. This Committee may save many of the innovations doomed to oblivion because no such agency is available to the potential innovator. The important value of this Committee would be its contact with new ideas that arise spontaneously and outside of rationalized research projects and departmental programs. It would acknowledge the personal and mutative quality of creative activity and yet retain the advantages of large-scale productive techniques.

¹ Cf. chapter IV of this work.

We have considered briefly those elements which if combined, operate to effect continuing entrepreneurial security and responsibility. In no sense have we offered a full and complete social policy. In fact, we have regarded one side only of Solterer's dilemma of social policy.

.....Removal or reduction of profit stops or reduces economic growth and cannot iron out the business cycle. But, at the same time, retention of profit income leads to social injustice, flowing particularly from the insecurity of the property-less wage earner, who has in many cases been reduced to the status of a subhuman tool.¹

We recognize – on the assumption of the duality of economic life – that the progressive elements are necessary and that the social dilemma cannot be resolved by the elimination of profit and competition. To reduce profit and innovational or dynamic competition is to reduce economic development; as a consequence the commodities and services which are the material and content for a higher standard of living are reduced. The problem of the lack of social and personal security still remains. In other words, some contribution we hope, has been made to the developmental side of social policy: the problem of social injustice still requires consideration. Although the latter is not our chief concern for this is an essay on the entrepreneur, we feel some remarks must be inserted. The problem may be examined in reference to the principles of corporatization and subsidiarity. The principle of corporatization postulates the need for vocational groups. However, it does not reveal the details of their structure. The innovation firm might profitably be considered as potentially such a group. It has the advantage of eliminating the problem of impoverishment due to depressed organizations. For a firm – innovational or other – to become a vocational group, two requirements are necessary: the fostering of loyalty to the

¹ Solterer, "Concerning Profit: A Dilemma and a Way," 369.

enterprise and the acceptance of it as a vocation; and the removal of dehumanization. A possible approach to these ends is via an accounting procedure that recognizes that workers, qua workers, are asset-holders in the organization (this has been given the title of the “Hall Proposal”) and an arrangement that acknowledges that the workers “should properly exercise the entrepreneurial functions of participating in the ultimate direction of the business, and of risk-taking.”¹

The principle of subsidiarity requires that a large organization may not take upon itself a social or economic responsibility that can be handled as efficiently by a smaller one. This principle is accounted for if the vocational group is organized on the level of the firm rather than the industry or economy, for here independent decision making is assured on the lowest possible level of economic organization. The innovation firm may well handle such large capital-demanding innovational activities as atomic economic development and in so doing is a restraining influence against the trend of governmental interference and employment.

¹ Ibid., The Hall Proposal has its origin in E.S. Hall’s *The Right Way*, Farmington, Connecticut.

CHAPTER SEVEN

SUMMARY AND CONCLUSIONS

We have traced the concept of the entrepreneur from its beginnings in economic literature to its present use; from the enterpriser of Richard Cantillon to the economic and business innovator of Professors Schumpeter, Cole, and Solterer. Four distinct meanings have been found: the entrepreneur as director and coordinator in the French tradition; the entrepreneur as the capitalist and owner in the Classical literature; the risk-taker or the agent exposing his wealth to conditions of uncertainty (Hawley, Dodd, and Knight); and finally the innovator – that agent who in some way purposefully changes the life and history in which he finds himself.

We intended from the start to concern ourselves with the active human agent and his role in economic change. But only the entrepreneur as innovator is active in this sense. This is not surprising for in the other cases the entrepreneur is found as a part of an analysis of distribution. All theories of distribution yet devised are static and consequently allow no place for this dynamic agent of economic development. Furthermore, as long as we remain in distribution theory the entrepreneur's income, profit, is either a superior wage or an unearned surplus. An appreciation of the innovator developed in the empirico-historical environment of nineteenth century Germany – in the hands of Schmoller and the Historical School generally. A remarkable synthesis made by Joseph A. Schumpeter combined the innovator and the deductive economics of the Lausanne and Austrian Schools to explain economic development. It is the function and activity of this innovating entrepreneur that we have subjected to the Aristotelian method of causal analysis.

The entrepreneur is the progressive economic element in the Aristotelian dualism of actuality and potentiality. He is the agent that periodically excites the economic cosmos from its lethargy – that arouses it from its persistent tendency toward repose and ultimate stagnation. Why he acts – his motivation – is the first of the four problems of this work. As the study of economic developed in the nineteenth century with increasing scientific rigor, it was accompanied – even aided – by an explanation of the motivation to economic action that was both rational and passive. Man is motivated to maximize his wealth, utility, or profit; to promote his own self-interest. This cannot be proved, nor can the terms be defined, said Bentham, but to say otherwise is to deal in sounds instead of reason. With the surge of anti-rationalism that appeared later in this century came the realization that the maximization principle is in no way a unique or complete answer to the questions of economic motivation. Man calculates and balances utilities but he also builds, forms, changes, and disrupts in historically real societies and economics. Moreover, he acts significantly when he is motivated to active economic achievement by incentives such as the joy to create, the innate urge to activity, the will to power, the desire for recognition, and the like.

The pre-changed state or condition before the onset of an entrepreneur is termed the Kreislauf. It is analogous to Aristotle's bronze out of which the work of art comes to be. It is the material aspect of entrepreneurship shorn of all its nonessential qualities. Otherwise it would not be possible to handle in any other way than to catalogue all economic phenomena subject to change; all economic goods and services, all factors, agents, and coefficients – all institutions, processes, and techniques. This theoretical, primitive conception of the pre-changed condition is definite by Schumpeter as an

unchanged economic process which flows on at constant rates in time and merely reproduces itself. The disruption resulting from the introduction of an act of innovation eliminates the static repose of the Kreislauf and results in the appearance of new phenomena. When the banker approves the entrepreneur's plan he offers credit – the entrance ticket to the social store of means of production. This brings an increase in system expenditure, higher prices, and a positive rate of interest. If the innovation is successful a surplus, which is designated profit, remains after all expenses are paid. As autodeflation sets in and risks of the future increase the economic process moves again toward a Kreislauf condition; toward zero interest, profit, loans, etc. Together these new phenomena comprise the formal aspect of the entrepreneurial act.

We do not attempt to explain fully the nature of the creative activity of the entrepreneur – the efficiency itself. We do observe, however, certain qualities or characteristics that appear persistent. First of all, whether the innovator be an entrepreneur or an inventor, artist, etc., there appears an internal elan that propels creative development. It is quite unlike the talent needed for intellectual pursuits; for while the latter talent seems also innate, it requires training, development, conscious thought, and understanding. Creativity, on the other hand, is spontaneous, mutative, in many cases monomaniac. The economic innovator, the entrepreneur, is almost certainly found to be a “new” man in the sense that he is unestablished in business. He is also a new man financially in that he does not personally possess the funds necessary to actualize his vision. He is the typical debtor to society because by borrowing a specified quantity of purchasing power he is able to commandeer goods and services for his own use from their previous employment. Furthermore, the entrepreneur is an individual who stands alone in society.

He is completely independent of class affiliation because class status demands a certain conventionality. The entrepreneur is an upstart whose ideas are generally ridiculed from the start. Finally, the entrepreneur is the aggressor. He must encounter more than ridicule; in fact, he meets active opposition from all of society's conservative elements. The most effective or disruptive the innovation the stronger the resistances.

We have before us, then, four answers to the problem of the cause of general entrepreneurial changes: the motives – the maximization of net advantage but of far greater importance the urge to create, etc.: the material or prior economic condition, termed the *Kreislauf* in its most primitive stage; the changed condition or development brought forth by vision, credit, increased system expenditure, capital, and giving rise to interest, profit, and the rest; and the strict cause – the entrepreneurial agent himself, found to be a new, unestablished, restless, sometimes monomaniac, and always creative human person. In short, the humanizing of the entrepreneur by Schumpeter permitted an important advance in correct theorizing. It allowed the most perplexing of economic phenomena – pure profit, capital, business cycles, and development – to be explained quite simply. This is perhaps the greatest of Schumpeter's contributions and is seen most clearly with the aid of the Aristotelian methodology employed here. It would be rash indeed to deny the Schumpeter did not utilize consciously or otherwise the Aristotelian technique himself.

An examination of the entrepreneur could not be complete without some investigation into the nature of the environment wherein the entrepreneur innovates and makes his decisions. We are concerned here with the institutional structure and framework of a specific society – consequently we return again to the formal aspect of our study. Up to

this point our consideration centered around business innovations, i.e. creative acts of a person guiding a profit oriented business unit within the economic organization. This involves a micro-economic conception of the entrepreneur. On the level of the economy as a whole, or even higher, on the level of society, there appears system innovations or creative acts that change the economic and social organization itself. This provides the foundation for a theory of social evolution in competition with the Marxian (or any other) explanation.

Much stress has been placed above upon a specific system innovation that has been brought into existence during the past two decades of our century by the corporation entrepreneurs associated with du Pont. The du Pont Corporation has become, what has been termed in this work, an innovation firm. Such a business organization is distinguished from an innovating firm, i.e. a firm operating with a new production function or in operation to launch an innovation, in that its function and raison d'être is to discover, produce, and promote public acceptance of successive innovations – it exists to produce new production functions successively and regularly.

This system innovation of du Pont assumes importance due to its potential value as a key factor in plans for social reorganization. The innovation firm gives hope for continued future development in an economic world that is becoming ever more rationalized. The opportunities for individual and independent entrepreneurial pursuits, on a large scale are somewhat more limited than formerly due to heavy financial requisites. An established concern financing innovations with a portion of past profits is not restricted to the same extent. Of far greater importance, however, is the suggestion that the innovation firm may be considered as a potential vocational group in conformity to the principle of corporatization.

The innovation firm, as possible corporate “vocational” organization, has the advantage of including potentially both the developmental or progressive factor as well as income stability and personal participation. It is recognized here that the great social problem may not be stated as a choice between progress and security. Both appear quite essential for the well-being of society, and indispensable for non-disruptive social evolution. It is the task of social ordering (another principle of social organization) and the end of the virtue of social justice to insure the presence of both. The common good requires: the initiation and preservation of progressive elements to change and disrupt on the one hand – entrepreneurial activity is such an element; and conservative elements to stabilize and equilibrate on the other – the resistance of the consuming public and the judgment of bankers are examples of these. The former elements bring development or economic progress; without restraint from the latter, however, the economy may well explode. Proper conservative elements bring security and social stability; without innovation, however, the economy stagnates. The progressive elements are necessarily to be found in the innovation firm by definition and will be actually present if the organization is a going concern. Adequate conservative elements have yet to be built-in. The Hall Proposal or some other responsibility- and profit-sharing proposal is called for here to eliminate the mechanization of human labor and dehumanization itself.

The latter are not our chief concern for this is a study of the entrepreneurial or developmental factor. One final remark on social stability, however, that does concern the entrepreneur is necessary. The economic innovators, whether business or system entrepreneurs, expect responsible treatment from society, which entails a social estimation that is intellectual and critical but not emotional. In short, a social “climate” conducive (or

at least not institutionally antagonistic) to entrepreneurial activity is absolutely essential. On the other hand, it is the hope of the future that an additional conservative or equilibrating quality may be built into the entrepreneur himself. This quality is of course moral entrepreneurial responsibility. The freedom of creativity must not be considered a right; but a duty and obligation of service. This can only materialize after the way has been clearly shown by an intellectual innovator, and then only as a result of a spiritual awakening. At this time we shall meet the economic innovator in his highest role, as Professor Solterer terms it, the entrepreneur as order-former.

The extension of the entrepreneur from business innovator to system entrepreneur and finally to order-former was possible after Schumpeter's explanation of the foundations of a dynamic economic system. The latter, however, reflects Aristotelian metaphysics – or more explicitly, Aristotelian dualism and the fourfold nature of causality. In the light of this, Joseph A. Schumpeter may be looked upon as having introduced Aristotelian and Christian philosophy into economic theory and, by extension, into socioeconomics and ethico-economics.

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