If criticism of such a chef-d'œuvre is at all called for it would have to question the adequacy of the photographical method itself. The book is a splendid sequence of narratives, rather than an analysis which would enable us to pick from the multiplicity of factors apparent in recent French history the dominating ones.

The survival of old-fashioned merchant capitalism, which distinguishes France so sharply from its Eastern neighbor, seems to be significant as a more general explanation of the French political scene with its well institutionalized graft, at least up to the first world war. Yet even for this period, a closer analysis of the problems facing French agriculture and of the cleavages between different categories of landowners would have been instructive. What we specially miss is an explanation of how and to what extent this merchant and finance capitalism put its imprint on a largely agricultural society—after having once disposed of the dangers inherent in the Paris Commune. The history of *causes célèbres* gives some working samples and some glimpses into, but no analysis of this process. And when our author truly describes the divergent position taken by Jaurès and Guesde in the Dreyfus affair, he omits to ask himself to what extent Guesde's scale of evaluating historical events had peculiar merits for a historical analysis. He rather takes the dramatic highlights, in which French political history is so rich, as a compass, and if he does not always follow traditional interpretations, he at least accepts the place and the weight usually ascribed to such events.

Large scale industrial capitalism made rapid advances, perhaps somewhat more rapid than the author was willing to admit, in the postwar years, and consequently the left wing political victories became much more difficult to reconcile with the economic power structure. Transfer of the ashes of republican heroes to the Pantheon wouldn't effect a reconciliation any more—even if they were the ashes of Jean Jaurès. It is doubtful whether even people better versed in financial matters than Herriot—our author follows in his evaluation the path of the perhaps not altogether unbiased judgment of the Governor of the Banque de France in 1924—could reconcile the glowing disparities of the progressive politics and conservative economics of the French system.

During the last period, the thirties, these contradictions lay quite in the open and are symbolized in the struggle around the Banque de France.

The photographic method of historical writing focusses its attention on the description of momentaneous situations dealing with the actions of social groups when and insofar as they come into the limelight of history. Brilliant and illuminating as the description appears in Brogan's case, it stimulates our desire still more to get down to a closer analysis of the main social forces, their attitudes and role, which would allow us to explain with a reasonable degree of accuracy the inner history of the French tragedy.

OTTO KIRCHHEIMER (New York).

Schumpeter, Josef A., *Business Cycles*. A theoretical, historical and statistical analysis of the capitalist process. 2 vol. McGraw-Hill Book Company. New York 1939. (1050 pp.; $10.00)

Schumpeter's new book is an inexhaustible source of information on the economic facts and theories relevant to business cycles, and as such it is a meritorious work, certainly above the average. He is no newcomer to the

realm of theory; his present work must therefore be judged in the light of his previous theoretical studies.

Schumpeter is an adherent of the subjective theory of value, even though his first book, "The Nature and Content of Economic Theories" (1908), did not show in detail how a science of economics would be built on subjective valuations. Psychic data are intensive magnitudes and hardly appropriate to serve as primary cells of an exact scientific structure, and Schumpeter in that earliest work emphatically refused to explain economics through an analysis of the psyche and the motives of economic activity (p. 77). He preferred to build an "exact discipline of human economy" (ibid. p. 117), a mathematical-functional theory, on the basis of objectively existing market phenomena, the objective relations of exchange. He sought to formulate "pure" economics "in a way similar to that in which mechanics describes motions" (ibid. p. 128), and to show that "it is possible to conceive it exactly and indisputably and that scientific correctness in the physicist's sense is not unattainable in our domain too" (ibid. p. 131).

This exact basis of exchange relations could, according to him, be expressed in a "girdle of equations" (ibid. p. 132) that would describe the problem of equilibrium at the center of statics (ibid. p. 118). Schumpeter realized that "statics" was nothing but a theoretical fiction. The reality was to be treated in the next book, "The Theory of Economic Evolution" (1912, second edition 1926). The book, however, turned out to be but a temporary and preliminary sketch, the elaboration of which has come only with the present book. Here Schumpeter has moved still further from the Austrian School, and especially from the conception that the consumer—man and his needs—is the initial factor in the study of economic phenomena and that the direction of the productive process and its changes are nothing but a reaction to the changes in the demand. "Railroads have not emerged because any consumers took the initiative in displaying an effective demand for their service in preference to the services of mail coaches. Nor did the consumers display any such initiative,—wish to have electric lamps or rayon stockings, or to travel by motor car or airplane, or to listen to radios or to chew gum. There is obviously no lack of realism in the proposition that the great majority of changes in commodities consumed has been forced by producers on consumers who, more often than not, have resisted the change and have had to be educated up by elaborate psychotechnics of advertising." (Business Cycles, p. 73.)

If this is true, however, the whole subjective theory of value is done away with. For the value of the productive factors is not and cannot be deduced from the value of the final product given as the degree of satisfaction of the demand. The relation between the final product and the productive factor is reversed and the basis of the prevalent doctrine is thus abandoned. Since Schumpeter does not present a new theory of economic phenomena, what he offers here is not a general theory attempting a causal explanation, but at best a partial theory of a special domain. All it aims to be is a positivistic description of the phenomena, in an "exact" mathematical disguise, nothing but a protocol statement: "it is thus and so."

But the book just published is remarkable for still another reason. The Schumpeter of 1908 planned to construct an "exact" mathematico-functional theory of exchange relations and he owes his renown as a theoretician to precisely that intention; the Schumpeter of 1912 did not apply this principle

to dynamics, but broke with his previous method. He did not succeed in passing from statics to dynamics while maintaining his "exact" conception of exchange relations. The strict method of statics proved inapplicable to dynamic problems. For that reason Schumpeter took refuge, in his second work, in the method which he had previously deprecated as "motivative" and "psychological." The promises of the first book were not fulfilled. The dynamic forces were not conceived "exactly," in terms of exchange relations or "a girdle of equations," but were deduced from the capitalist's psyche, from his constant urge for innovations: his "joy of forms," his "daring because of his very difficulties," his "will to victory" in the "financial boxing match," in brief, from "economic activity considered as a sport." (Theory of Economic Evolution, p. 138 et seq.) Thus, Schumpeter's scientific fame as an exponent of "exact" economic science was founded not on the accomplishments of his second book, but on the unfulfilled promises of his first.

The Schumpeter of 1939 revolutionizes his methodological foundations for the third time: the motive force of all economic changes is no longer to be found in exact exchange relations nor in the capitalist's heroic personality, but in his banal, prosaic quest for profits, already stressed so much by Ricardo and later by Marx: the only thing that counts is the magnitude of profit and its changes. The capitalist no longer functions as the original dynamic force which spontaneously works changes. His activity is itself merely a result and he himself a mere stopping point in the automatic workings of the entire mechanism, aiming to restore a vanished rentability. Methodologically it is interesting that through this inner tendency toward accumulation, and excluding all external influence, Schumpeter tries to explain both the expansion and the depression that follows. He rejects the opinion that the impulse towards the change and expansion of the economic mechanism, originally conceived as static, comes from the consumer and the change in his needs.

The author has many intelligent things to say here (pp. 76-77) about differences between saving, not spending, accumulation, investment, and real investment; his exposition is often more correct and clearer than, for example, similar passages in J. M. Keynes. He attempts a conceptual analysis of dynamic reality, choosing the methodological procedure, customary since J. S. Mill, which begins with a stationary, constantly reproduced system excluding all external disturbing influences. Then, the path to reality is sought by successive approximations. Schumpeter is interested above all in the real source of the dynamic changes, the "prime mover in the process of internal economic change" (p. 72). The stationary system is so defined that there are no savings in it, and therefore no loans either; the rate of interest is thus equal to zero; lastly, there are no profits. Into this stationary phase the factor of savings is first introduced and the factor of accumulation, then inventions; the influence of each of these elements on the course of the process of reproduction is then examined.

As his first approximation, Schumpeter thus takes for his point of departure "a society, stationary in every respect except in that it displays a positive rate of saving." The productive functions follow the same course year after year; there are no external disturbances. The only form of investment opportunity that exists is that of loans to enterprises. Thus, credit exists only in the form of credit for productive ends. The only source of this credit and of the monetary capital offered for it is real savings. The

creation of credit is thus excluded. It is true that credit expansion through the creation of credit is one of the chief sources of enterprising activity and therewith of the secondary wave of industrial and speculative activities, but Schumpeter is here endeavoring to reveal only the primary sources of cyclical motions, and the creation of credit must remain excluded. Within this pattern the means of payment is real gold passing from hand to hand in each transaction (p. 79). A state of competitive equilibrium exists at the beginning and Schumpeter's schematic model is intended exclusively, *ceteris paribus*, to show the effects of the factor of saving and of investment, and in particular to clarify the question whether savings as such can cause depression.

It is true that an influx of new savings offered to the enterprises would result in a constant expansion of the industrial apparatus through the constant addition of new plants or new machines. But as long as these machines and plants would be of the same type as the ones previously used, under the assumption of an unvarying technical and organizational set-up, this growth in the industrial apparatus would be accomplished in a relative equilibrium. True, this equilibrium would constantly be disturbed by the influx of new capital savings. But granted a given rate of savings the economic mechanism would continuously "adapt" itself to this rate, i.e. would continuously absorb the disturbances. As a result of the savings, the rate of interest would necessarily drop, and therefore new investment opportunities would arise, opportunities which had not existed at the previous, higher rate of interest. On the other hand, the enlarged productive apparatus would "certainly" find new buyers of merchandise,—because every saving, just as it creates its own investment opportunities, also creates its own demand for the additional products manufactured in the new plants.

The proof of this wonderful harmonic development, however, is the author's bare assertion of it. The matter treated is eminently quantitative: the additional workers receive additional wages and additional purchasing power, and the new plants produce an added mass of commodities for the market. The problem consists in finding out whether the additional mass of values and the additional purchasing power can coincide. Here is a brilliant occasion for showing in an "exact" mathematical manner, by means of a "girdle of equations," how such an equilibrium could arise from the disequilibrium admitted by Schumpeter, how the consumer's social purchasing power each time just suffices to dispose of the increased mass of products thrown on the market by the producers. Instead of a proof, however, Schumpeter is content with a mere statement that the system has "adapted" itself to the new savings rate; but he says nothing about how this "adaptation" takes place, simply assuring us, "the new producers' commodities are sure to find their buyers" (p. 79).

With a method such as this all the problems in the world could be solved on paper. Schumpeter has arrived at the old harmonistic theory of Investments and "Débouchés" of Ricardo and J. B. Say without supporting it by any new argument or weakening the 150 year old critique of it.

So far, we have not taken into account the internal contradictions of Schumpeter's construction. It starts with the equilibrium and assumes an increase of production in a society which otherwise is "in every respect stationary"; in particular it presupposes "that production functions are invariant," that is, that the technical-organizational basis remains unchanged,

or, in other words, that "the same types of plants and machinery" are used as before (p. 79).

It is evident that these presuppositions are contradictory. We begin with a state of equilibrium in a stationary society wherein all the means of production and all the workers are occupied. If we assume an invariant technical-organizational basis, the additional plants and machines can be put into motion only by an additional number of workers. But in Schumpeter's stationary model the population, too, is stationary, for he counts the "variations in population among external factors" (p. 74), which are excluded from his stationary model (p. 79). Clearly no increase of production is possible in this model at all. In the second place Schumpeter assumes that in passing from the stationary phase to that involving increased production, the producers of consumers' goods suffer no losses. Every producer therefore will at all times be ready to absorb additional capital for an increase of production: "this process can go on indefinitely" (p. 80), so long as the rate of interest has not fallen to zero. This is again an unproved assertion, which is clearly false because every rearrangement of the stationary economy in the direction of increasing production necessarily restricts the production of consumers' goods and therefore also causes losses to the owners of the enterprises concerned.

But Schumpeter holds that even in the latter case no disturbance would ensue and the prices of consumers' goods would not fall. Accepting the famous Tugan-Baranovski merry-go-round which forty years ago was demonstrated as theoretically untenable, he believes that the equilibrium would be reestablished because the increased production of production goods would take the place of the restricted production of consumers' goods. "The demand from the increased incomes in the machine industries steps into the place of the demand discontinued by savers," he says (p. 82). Thus, when there is a displacement of the demand for consumers' goods, the total amount of consumption does not have to fall. And even if one is willing to grant—for the sake of the argument—that the asserted displacements actually take place, one finds that Schumpeter has not attempted to investigate the quantitative problem of the demand for substitutes and of the time factor, and that he has not tried to show that the missing consumption of one consumer group can be replaced in the same unit of time by the new demand of another group; also that the new demand, originating in the machine industry, is quantitatively equal to the previous demand in the consumers' goods industry. Yet, it is known (only, Schumpeter does not take this into account) that machine industry occupies considerably fewer workers (the total amount of investments being the same) and therefore also creates less demand for consumers' goods than does the consumers' goods industry.

Since the savings process is not a single act, but continuous, the need for rearranging industry and increasing the production of means of production would not be a single act—this according to Schumpeter's own presuppositions—but would provoke a wave of successive rearrangements; in short, it would constitute a permanent disturbance.

Schumpeter solves all these theoretical difficulties with a word, "adaptation." He never describes the process of adaptation. The desired result of it —the equilibrium—is introduced as a *deus ex machina.* If this "adaptation" takes place, the system functions "satisfactorily," and we are in "equilibrium."

The latter concept plays a fatal role in the whole exposition. At first, equilibrium is a sort of system of reference which enables us to measure how far removed the real system, afflicted with chronic disequilibrium, is from an ideal point of reference (p. 69). Schumpeter, however, does not stick to this ideal "theoretical norm," but assumes a really existing tendency toward equilibrium (p. 70), to which he ascribes great diagnostic significance, though the equilibrium itself is never reached: "the system approaches a state which would—if reached—fulfill equilibrium conditions" (p. 71). The mode of argumentation runs somewhat as follows: if we had to deal not with our reality, but with an imaginary world, then the conditions of equilibrium would easily be achieved! Schumpeter carries this unrealistic conception so far that he speaks of the constantly growing significance of the concept of equilibrium for economic theory! Here, too, Schumpeter is a victim of self-delusion. For more than 150 years—from the physiocrats, Smith and Ricardo, to Walras, Marshall and Pareto—the concept of equilibrium lay at the basis of all economic theories. The result was that everyone spoke of the failure of economic theory, because it progressively lost all relation to reality and was no longer able to explain it. This sad state finally brought about a reaction; a theoretical opposition against the concept of equilibrium recently arose, an opposition which regarded the concept not only as superfluous but even as harmful and responsible for the retarded development of economic theory as such. Schumpeter has not considered this development in economic theory but continues to represent old, untenable views.

We do not want, however, to dwell any further on these important, though merely preliminary arguments. We shall now examine his main theory: the concept of business cycles. In contrast to the previously considered model of a stationary economy, this theory treats the problem of change as such: "How the economic system generates evolution." Here, too,—for the sake of argument—the author starts from a stationary economy without savings and profits in order to determine how "evolution" arises in such a model. We have seen above how he methodologically isolated the factor of savings and accumulation and tried to demonstrate that the influence of this factor alone would result in an "increase," but an increase which would not disturb the equilibrium. This time he wants to isolate another factor (though both are in reality connected and mutually influence one another), which is responsible for all the disturbances of the equilibrium and is at their root. This factor is "Innovation," by which Schumpeter means not only technological improvements, but all other organizational improvements (new methods in the production of the same goods, the introduction of new articles, the discovery of new markets or new sources of raw materials) (p. 84). "Innovation" is always merely the economic reaction of the system to a specific situation of the economy—non-profitability—and for that reason is, according to Schumpeter, the internal factor in the economic history of capitalist society (p. 86). To him production is nothing but a combination of various production factors. He builds his theory on the following assertion: "the physical marginal productivity of every factor must (in the absence of innovation) monotonically decrease." The monetary expression of this situation, if the prices of the production factors are constant, is increasing cost as compared to decreasing returns (p. 88), as a result of which the profitability of the enterprises falls or, in limit cases, vanishes entirely. Thus, falling profitability, which characterizes the depression, is discussed without the help of external

influences, it is true, but in a naturalistic-technical manner. In this central point of his theory—falling profitability—Schumpeter gives no proof, but dismisses the problem in the few words just quoted. At this point the innovation sets in. It is the capitalist's reaction to vanishing profitability. Its task is to restore profitability by a reorganization of productive factors. The innovation interrupts the falling curve of returns, replacing it by another which begins on a higher level, only to fall again later. Wherever the cost of a commodity or a particular productive factor has decreased, we have a sign that the innovation has taken place. But, Schumpeter assures us, the costs will never fall constantly; there is no law of falling costs,—such a law is but an optical illusion (p. 91). In reality costs fall only at intervals. For once the innovation has been introduced generally, it ceases to be an innovation (p. 89); its efficacy is exhausted, and cost begins to rise again. ("Law of Increasing Cost.") Thereby non-profitability breaks through anew (p. 90).

Thus Schumpeter believes he has arrived at one cause to explain, if not the periodicity, at least the process of alternating phases of prosperity and depression (p. 193), which he later differentiates into the four well known phases of the cycle. He directs his criticism particularly against the so-called "self-generating theories," according to which depression arises out of prosperity and prosperity out of depression. He denounces this theory as a theoretically inadmissible *perpetuum mobile* (p. 139). (This has been done before him, Cf. Grossman, *Das Akkumulationsgesetz*, p. 229). This endogene cyclical process develops only in the industrial sphere. As regards the Stock Exchange, the starting point of the depression, the falling of stock and bond prices is exogenous, provoked by the impulsion coming from the industrial sphere (p. 152).

Schumpeter seems convinced of the great originality of his innovation theory. The expert, however, will see at once that Schumpeter remembers on this point—and despite all other differences—more of Mill's and Marx's explanations of the cycle than he would care to admit, that capitalist production operates not for use, but for profit. When profitability disappears, the capitalist mechanism of production, and capitalist accumulation, come to a standstill and can be revivified only by a rearrangement of technical and organizational bases. The theory is not made any more original when the name of "innovations" is assigned to what Mill and Marx called "counter-tendencies."[1] Nor is the theory made more original by projecting the innovations, which in Mill and Marx are objective reactions of the economic mechanism to a specific situation, into the realm of personality and by presenting them and glorifying them as the special merit of the capitalist, as his creative function. While Marx, on the basis of the law of value, deduces the periodic drop in profitability from the social process of accumulation, that is, from the increasing organic composition of capital, Schumpeter takes refuge in an untenable naturalistic-technical explanation, whose model he has found in the obsolete Ricardian doctrine of the decreasing yield of the soil and which he has merely transposed from agriculture to industry.

Schumpeter's theory of the falling profit is an *ad hoc* theory, unintegrated into any larger doctrine. Moreover this theory cannot be theoretically

[1]Cf. the exposition of the "counter-tendencies" in Mill and Marx in my book "Das Akkumulationsgesetz." Leipzig 1929. pp. 112-117 and 287-530.

grounded on Schumpeter's own premises. It is therefore unnecessary to dwell on Schumpeter's effort to illustrate the theory by statistical and historical data.

In recent years, just as 120 years ago, the center of the discussions has not been the problem of the business cycle. Ricardo and, later, John Stuart Mill and Simonde de Sismondi disputed not only about the causes and the inevitability of depressions, but about a wider question, that of the economic structure changing in the course of its contradictory development, that is, they discussed the tendencies in the evolution of capitalist economy. The question that interested them was thus whether this economic system is durable or whether it approaches its end as a result of its inner structural changes. This decisive problem, which has become even more important after the great depression of 1929, is not discussed by the author; not even the question of increasing "structural" unemployment which may become the tragic fate of the existing economic order. On the contrary, Schumpeter tries to avoid a direct answer to such questions, in order to deal with them by the détour of his peculiar definition of "evolution." Economic "evolution" is conceived in "a quite narrow and particular sense, abstracting from all the concrete content of evolution" *(The Nature and Content,* ibid. p. 95). If this definition were to hold, of course there could be no definite direction of evolution in the sense indicated above. What would remain would be the abstract empty idea of a "something" moving without any direction, and "evolution" would here be identical with "change."

Nor does the new book go beyond that result. It is hence to be expected that Schumpeter would slur over such an important problem as that of over-accumulated capital which cannot be profitably invested, a problem particularly pressing in the U. S. A. The fact that many billions of dollars remain idle for many years in the banks of the U. S. A. would not result from the objective situation of American capitalism, from a definite change in structure during a late phase of development, or from a saturation of the economy with capital for which no new and sufficiently profitable investments are at hand. Schumpeter hardly examines this problem—according to him, this is no problem at all. Instead, he describes how the bad government policies of the New Deal victimized the capitalists, declaring that the Roosevelt government has shaken the confidence of the capitalists as a result of its gigantic spending policy, its oppressive taxation and, above all, its open threats against the industrial middle class (pp. 1044-1049), thus contributing to the paralysis of all creative enterprises without putting anything in their place. Here, instead of analyzing the objective structure of American capitalism, Schumpeter offers us accusations against the government. He does not make the simple reflection that similar phenomena of over-accumulation could also be observed in Europe (England, France, Switzerland, etc.) where the relations between government and industry were very different from those in the U. S. A.

This central problem, which the author does not see, disappears in a mass of secondary details; he always deals with particular equilibria, for example, those between a producer and a buyer in an otherwise competitive society; the "cases" are split into "subcases," and each case must be treated separately, until the author finally gets lost in purely private considerations of the profitability of particular firms. For instance, when he takes up a bilateral monopoly he inquires under what conditions a monopolistic workers' union can obtain a maximum of wages and he believes he has proved that "perfect

equilibrium may . . . be compatible with the existence of unemployed resources" (p. 59).

It is evident that the concept of equilibrium is being abused here. A "perfect equilibrium" involving unused production factors is an obvious contradiction, not to mention the significant omissions of the author, his failure to deal with the general equilibrium of the entire system, or even with a particular equilibrium of a particular market or industry branch, but only with the maximal profitability of two concerns!

Schumpeter's predilection for casuistry is demonstrated, for instance, in the treatment of the problem of monopolies. Capitalist reality reveals a general trend toward the concentration of enterprises and the formation of a few large monopolies dominating entire branches of industry. Thus the question spontaneously arises, how a society would function in which such monopolistic tendencies triumphed in all industrial branches so as to form a "universal monopoly." This problem has a great theoretical significance. But Schumpeter has his sympathies and antipathies: he does not like the New Deal, nor anything that means planning and organized economy. For that reason he dismisses this real and important problem with the bare assertion that such a universal monopoly "would be inactive" (p. 57). He prefers to illustrate capitalist monopoly by the example of Nansen and Johansen who, during their polar expedition, were left with only one remaining sled and could not agree about the direction of their voyage, but finally had to reach a compromise (p. 62).

We have seen that Schumpeter fights the theory of the shrinking of capital investment opportunities and sees the cause of the evil in the disastrous government policy. It is true that he is not certain whether capital investment would flourish again if after the 1940 elections men more friendly to business were to assume power; and he says: "The practical implications of our diagnosis do not differ much from those of the theory of vanishing investment opportunity in its usual acceptance" (p. 1050). A similar lack of logic is revealed in Schumpeter's criticism of the government's currency and credit policies, in particular of its "spending" program. According to him, these policies have not achieved their desired effect, they had nothing to do with restoring prosperity in the years 1935 to 1937, because this prosperity took place independently of government measures (p. 1031). But a few pages later we read, to our surprise, that "even government spending as a permanent policy could be rationally defended on our diagnosis" (p. 1050).

If it is true that science consists in subsuming the complex mass of phenomena under general laws which express the true nature of things, then Schumpeter has not made use of a real theoretical idea. In spite of his great erudition and many stimulating details he loses himself in a bewilderment of detail.

HENRYK GROSSMAN (New York).

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