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A PROFESSIONAL SKETCH*

By Frederick C. Mills

On December 28, 1947, at the sixtieth annual meeting of the American Economic Association in Chicago, Wesley Clair Mitchell received the first award of the Francis A. Walker Medal for pre-eminent contributions to economics during a lifetime of distinguished service. In a graceful tribute President Douglas expressed the admiration and affection in which Professor Mitchell was held by the economists of America. Mitchell's death came ten months later. It is a source of deep satisfaction to all members of the Association that opportunity was given while Mitchell was yet alive for the expression of our feeling for him, and for the acknowledgment of our indebtedness to him. We knew then, as we know now, that the award was made to one of the great figures in the history of our science.

I

Wesley Clair Mitchell was born in Rushville, Illinois, on August 5, 1874. His father was a country doctor who had served as a surgeon in the Union Army during the Civil War. The family was of New England stock, and although a Middle Western boyhood and later adult years in California and New York left their impress on Mitchell, something of the New England strain was always discernible in the pattern of his thought and life. His father's practice, which was limited by the effects of wounds received during the war, was combined with the management of a fruit farm on which the seven children worked during their early years.

Mitchell's pre-college schooling followed the pattern of the times, but home influences and his own native qualities contributed to produce a mind that was keen, sensitive, and richly stocked be-

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fore he left the farm for college work. He had an abiding love of poetry and a delicate awareness of the subtleties of speech and the rhythms of the English language—qualities that must be acquired early, or not at all. His youthful training in logic he has described with singular charm. Christian theology was the instrument on which he polished his youthful wits, and a well-loved grandaunt was the protagonist of this theology.

She was the best of Baptists, and knew exactly how the Lord had planned the world. God is love; he planned salvation; he ordained immersion; his immutable word left no doubt about the inevitable fate of those who did not walk in the path he had marked. Hell is no stain upon his honor, no inconsistency with love. . . . I adored the logic and thought my grandaunt flinched unworthily when she expressed hopes that some backstairs method might be found of saving from everlasting flame the ninety and nine who are not properly baptized. But I also read the Bible and began to cherish private opinions about the character of the potentate in Heaven. Also I observed that his followers on earth did not seem to get what was promised them here and now. I developed an impish delight in dressing up logical difficulties which my grandaunt could not dispose of. She always slipped back into the logical scheme, and blinked the facts in which I came to take a proprietary interest.¹

The young University of Chicago offered rich fare to a mind thus prepared. John Dewey provided a kind of logic that was far removed from that of nineteenth-century theology, and a way of regarding the operations of the human mind that was a revelation to the young student. "It is a misconception to suppose that consumers guide their course by ratiocination—they don't think except under stress. There is no way of deducing from certain principles what they will do, just because their behavior is not itself rational. One has to find out what they do. That is a matter of observation, which the economic theorists had taken all too lightly."² Thorstein

¹ Letter from W. C. Mitchell to J. M. Clark, first published in 1931, and reprinted in Mrs. Mitchell's paper in this volume, pp. 93-9.

Years later, on declining an invitation to make some laudatory remarks that would have been hypocritical, Mitchell said that only once in his life had he expressed views that did not represent his convictions. He had made this one departure from probity to ease his grandaunt's forebodings.

² *Ibid.*

Veblen provided edification of another sort for the youthful agnostic with a weakness for subtle paradoxes. Veblen's influence on Mitchell was profound (the paper on "Industrial and Pecuniary Employments" provided insights that helped shape the study of business cycles and much of Mitchell's later thinking); but the young student could view Veblen, too, with detachment, enjoying his brilliant expositions and sardonic style while appreciating that this, also, with all its penetrating suggestiveness, fell short of sound craftsmanship. ("How important were the factors he dealt with and the factors he scamped was never established.")

Somewhat more conservative approaches to economics were open in the well-documented course of Adolph C. Miller on English economic history, and in J. Laurence Laughlin's offerings in money and banking. Mitchell's first serious investigations and his early undertakings as a teacher reflected Laughlin's influence. His study of the greenbacks stemmed directly from Laughlin, and Mitchell was first introduced to the phenomena of business cycles in Laughlin's courses. One other of Mitchell's teachers of economics, William Hill, played a formative role at this stage. An assignment by Hill of a course paper on "Wool Growing and the Tariff" sent Mitchell first to the reading of tariff speeches—an illuminating experience in its own right—and thereafter to his first comprehensive job of data gathering. Mitchell's native agnosticism was strengthened by the contradictions he found between his statistical conclusions and the notions he encountered in Congressional and academic discussions of the tariff.

Unsystematic but fairly extensive readings in anthropology (instigated by Veblen) and some systematic course work in psychology carried Mitchell beyond the programs of study followed by most students of economics. This period brought, too, first contacts with Jacques Loeb, the brilliant physiologist. Loeb's studies of the phenomena of behavior at both the physiological and psychological levels influenced Mitchell not only in their substance, but as illuminating examples of scientific method. Loeb gave Mitchell positive, firsthand acquaintance with rigorous methods that were clearly fruitful in studying one aspect of organic behavior. Mitchell was prepared to appreciate their potential fruitfulness in dealing with other aspects of behavior. Here were instru-

ments that offered something positive and satisfying to a mind rendered skeptical by early predilections, by Veblen's biting critiques, and by Dewey's iconoclastic treatment of conventional attitudes toward processes of thought. Loeb's influence on Mitchell, confirmed and strengthened through later association at California, was deep and lasting.

In this background we have some explanation of Mitchell's ability to get outside the framework of traditional economics, to view with a fresh eye the problems economists set themselves and to appraise from a fresh viewpoint the methods employed by economists in attacking these problems. The projection of these factors helps, too, to explain Mitchell's characteristic attitudes in later years, and his own choice of problems and methods.

Mitchell's undergraduate and graduate studies at Chicago were broken by an interim period of one year spent at Halle and Vienna, where he attended lectures by Johannes Conrad and Carl Menger. There is no evidence that this experience had any material influence on Mitchell's thinking. His outstanding qualities as an economist were distinctive of procedures and ways of thought that had their characteristic development in this country.

Mitchell's doctorate was completed at Chicago in 1899, his thesis being a *History of the Legal-Tender Acts*. Thereafter came a year at the Office of the Census and two years at Chicago as instructor in economics. During this period his doctoral dissertation was expanded to become a *History of the Greenbacks*, a notable study in itself and a point of departure for much of Mitchell's later work.

In 1903, Mitchell moved to the University of California at Berkeley to begin a decade of fruitful work and of steady personal growth. His tools of research were sharpened and his mastery of them perfected. His brilliant greenback studies were extended. But the confines of this enterprise were too narrow, and Mitchell soon laid it aside. (*Gold, Prices, and Wages under the Greenback Standard* contains basic data he thought it well to make available to other scholars, with explanatory notes, but the material was not fully exploited.) Some of the essential problems with which he was concerned in his first studies persisted, but Mitchell sought to

solve them in a much wider framework, analytical and observational. The massive monograph on *Business Cycles*, one of the great products of scholarship in the social sciences, was the result.

The labors that led to the solid contributions of these California years did not preclude other activities. This was a rich period in Mitchell's life, to which he always looked back as something of a personal golden age. A young man intellectually somewhat aloof and inclined toward austerity mellowed in the sunshine of the West and in the easy, pleasant companionships of the young University. His associations within and without his own department were congenial. An active Philosophical Union helped to provide intellectual fare. He took to the Sierra avidly, relishing the free ways, the free language and the physical release to be found in mountain climbing. A companion of those days says that Wesley's inhibitions were peeled off like the layers of an onion as successive altitude levels were passed. He found a wife, too, in the West; when he left California he took with him the Dean of Women of the University.

Mitchell ended his term at California in 1912. Marriage and the completion of his Cycles study combined to mark the end of one period of his life and the beginning of another. His own professional desires and the interest he and his wife shared in problems of education were both served by a move to New York. There was a break of several months which were spent abroad; final tables for *Business Cycles* were prepared at Berchtesgaden, when that word meant merely a beautiful spot in the Bavarian Alps.

Mitchell returned to the United States in December 1912, and in 1913 began his service in the Faculty of Political Science at Columbia. The department of economics was small in those days. J. B. Clark was still meeting students occasionally; Seligman, Seager, Simkhovitch and Moore were the continuing members of the teaching staff when Mitchell joined it. None who attended Mitchell's courses in those early years will forget the sense of excitement and anticipation with which one entered a class. Mitchell was giving a course on Business Cycles, a reflection of his continuing research interests. Equally stimulating to the students of that day was his new offering on Types of Economic Theory. Mitchell's

early discontent with economic theory, a discontent clearly manifest in his own account of his student days,³ had been combined with a sense of the need of generality if we are to have adequate explanations of complex reality. There was a conviction of need, a profound unhappiness over what was offered. *Business Cycles*, indeed, had been regarded by Mitchell as an introduction to economic theory. The completion of that study gave Mitchell opportunity to turn to a more systematic review and appraisal of theory than he had yet undertaken. This he did in the years following 1913, and the members of his small classes had opportunity to join in this review with him.

The content of this course varied somewhat from year to year. In its early form it included expositors of English classical doctrines through Marshall; Jevons and Walras; Sombart, Schmoller, Schumpeter and von Wieser; Fetter, Davenport, and, extensively, Veblen. The treatment of each author studied dealt with the substance of that man's thought, and with the social and intellectual setting of this thought. At a later time Mitchell wrote, "Scientific progress consists largely in this process of taking thought about what had theretofore been taken for granted. As any science grows it keeps turning back upon itself in this fashion, and thus becoming conscious of more and more elements in its structure."⁴ Mitchell's native skepticism, his excursions into anthropology and psychology,

³ "Men had always deluded themselves, it appeared, with strictly logical accounts of the world and their own origin; they had always fabricated theories for their spiritual comfort and practical guidance which ran far beyond the realm of fact without straining their powers of belief. My grandaunt's theology; Plato and Quesnay; Kant, Ricardo and Karl Marx; Cairnes and Jevons, even Marshall were much of a piece. Each system was tolerably self-consistent—as if that were a test of 'truth'! There were realms in which speculation on the basis of assumed premises achieved real wonders; but they were realms in which one began frankly by cutting loose from the phenomena we can observe. And the results were enormously useful. But that way of thinking seemed to get good results only with reference to the simplest of problems, such as numbers and spatial relations. Yet men practiced this type of thinking with reference to all types of problems which could not be treated readily on a matter-of-fact basis—creation, God, 'just' prices in the middle ages, the Wealth of Nations in Adam Smith's time, the distribution of incomes in Ricardo's generation, the theory of equilibrium in my own day." (From letter to J. M. Clark, *op. cit.*)

⁴ "Postulates and Preconceptions of Ricardian Economics," reprinted in *The Backward Art of Spending Money and Other Essays*, p. 205.

and his ability to look at traditional economics with an objective perspective admirably fitted him to deal thus with the postulates and preconceptions of various types of theory.⁵

In the conduct of this course Mitchell played the part of a detached and skilful expositor, a leader of discussion, a stimulator of critical appraisal. His treatment of his class was gracious, stimulating; his interpretations were illuminating revelations to most of us. The facts of social history, the character of the climates of political opinion that dominated the years when particular theories were taking shape, and the threads of philosophical thought that ran through these years were developed systematically as the assumptions of different theorists, conscious and unconscious, were laid bare. Mitchell's own views were subordinated, except in his closing lectures, although they were inevitably revealed by implication and indirection. It was clear that a genetic explanation of economic phenomena was congenial to Mitchell's thought; that rationalistic assumptions were suspect; that understanding of economic behavior was to be sought through a study of human motivation at the level of the instinctive and the unconscious as well as at the level of rational activity; that institutions, "prevalent social habits," were at once controllable and controlling in the processes of economic life; that economics could play a major role as a positive instrument of human progress.

This course, like every course that Mitchell gave, was an adventure in education. Mitchell possessed in high degree the qualities of a good teacher. There was insight in his analyses; there was a freshness of view that he never lost; there was lucidity of thought and expression, and masterly orderliness of exposition; there was a sense of sharing with the student the task of inquiry. Above all,

⁵ His distinction between logical postulates, which are consciously recognized and taken for granted, and preconceptions—convictions that shape the general trend of a man's thinking without being themselves submitted to critical scrutiny—is revealing for the light it throws on Mitchell's ever-present suspicion of rational processes. "We take postulates up, play with them, and drop them for others. They are external to us and we feel no affection for them. But preconceptions are parts of us. They grow up in our minds. We are but dimly aware of the role they play in shaping our conclusions about the matters on which we focus attention. . . . Even in our most rigorous work we are influenced by them." *Ibid.*, p. 205.

perhaps, was the sense of integrity. Here was a man without affectation, without pretense, who honestly sought understanding.

Mitchell's reputation had been established by the time he came to Columbia; he had reached full scholarly maturity. Yet his growth continued and his accomplishments multiplied. A steady (but not a voluminous) flow of papers, reviews, addresses and more extensive studies came from his pen. Into each, whether brief or extended, went care in the construction of a logical and orderly argument, skill in the marshaling of evidence, and objectivity in the use of that evidence. Each, too, was in exposition a work of craftsmanship by a man who used the instrument of language with sensitivity and precision.

There was also an almost uninterrupted series of public and professional services and of accumulating honors. Mitchell was chief of the Price Section of the War Industries Board during the first World War, chairman of the President's Research Committee on Social Trends, a member of the National Planning Board of the Federal Emergency Administration of Public Works, and of the National Resources Board; he served as chairman of the Technical Committee appointed by the chairman of the President's Committee on the Cost of Living, when the controversy over the accuracy of the index of living costs threatened to check the steady production of goods during the second World War. There was the launching in 1920 and the directing for a quarter of a century of a new instrument for the advancement of knowledge—the National Bureau of Economic Research, an institution which in very truth is the lengthened shadow of Wesley Mitchell. Over a long stretch of years he helped to break down the barriers between the social sciences and to unify their activities in the Social Science Research Council. He was one of those who founded and shaped the New School for Social Research. Counsel and guidance were given over many years to the Bureau of Educational Experiments. He was called upon to direct the affairs of professional societies, serving as President of the American Economic Association, the American Statistical Association, the Econometric Society, and the American Association for the Advancement of Science. There were elections to learned societies at home and abroad. Honorary degrees came from the University of Paris and from major universities in this

country. These were rich honors and they were not unwelcome; but he remained to the day of his death a modest scholar, who would both gladly learn and gladly teach.

II

The general pattern of Mitchell's work as an economist was foreshadowed in his *History of the Greenbacks*. There was broadening, diversification, and enrichment in subsequent activities, but in notable degree later developments were natural outgrowths of the play of a questing mind on a set of problems first attacked in the greenback study. These problems were products of contemporary conditions—the long period of price decline and debtor difficulties that generated the cross-of-gold speech, the free-silver program, and the sound-money controversy of the McKinley-Bryan campaign. This price decline provided the great economic issue of that day. Its causes were furiously debated within and without academic halls. Francis A. Walker and J. Laurence Laughlin, Mitchell's teacher, were adversaries in a sustained debate on the quantity theory of money. Mitchell's first published paper, written as an undergraduate, was a contribution to this discussion, with Mitchell taking a highly critical view of that theory.⁶ It was natural that this should be the path by which Mitchell entered upon serious economic study, and that his first major investigation should deal with the issuance of money and with related price-level and other changes. What is notable, however, is the rapid and steady growth, the passage from an old controversy to realistic research on larger issues and more fruitful phases of the interrelations of money and prices. This growth was steady and cumulative. There is a clear, unbroken thread running through Mitchell's major studies—from the *History* to *Measuring Business Cycles* and to the manuscripts that were left unfinished at his death. Mitchell's life

⁶ "The Quantity Theory of the Value of Money," *Journal of Political Economy*, March 1896.

It was not many years before Mitchell himself condemned the restricted conception of the quantity theory on which the argument of this paper was based. See "The Real Issues in the Quantity Theory Controversy," *Journal of Political Economy*, June 1904.

was given to a single great endeavor, pursued tenaciously, imaginatively, flexibly, and unremittingly. In some sense the job was unfinished at his death; the self-imposed task of mastering a vast and shifting body of data was foredoomed to incompleteness; but the incompleteness was the incompleteness of life itself.

Mitchell's concern in his *History of the Greenbacks* was with the economic consequences of the legal-tender acts. The pursuit of these consequences led him to an examination of the effects of changes in the purchasing power of the standard money upon the distribution of the national dividend during the wartime boom from 1861 to 1865. The shares in this national dividend, first studied in money terms, through an appraisal of price fluctuations and shifts in relative prices, were then assessed in real terms. Beyond this study of changes in the real incomes of laborers, landlords, capitalists, and business managers lay a broader question—what effects these changes had upon the production and consumption of wealth, again at the level of material things.

In the unfolding story of these four years of monetary depreciation and rising prices we find elements that entered into much of Mitchell's later work: the money level and the real factors underneath; the rôle of prices and, in particular, the importance of differential price changes in determining the fortunes of different groups; the effects of relative price changes upon profits, and the relations between changes in profits and changes in the rewards of other factors. For a single major phase of wartime expansion Mitchell was seeking to define the sequence of cumulative changes by which depreciation of the standard of values altered the system of money payments and thereby shifted the distribution of real income. But his study was restricted in time and its scope was confined to a limited number of economic processes. Before this and the closely related successor study were finished Mitchell knew that he had not gotten to the bottom of the problems he faced; he had, moreover, learned to see these problems in a larger way.

Renouncing, therefore, the limited study within the period of the greenback episode, Mitchell turned first to a more general analysis of the system of prices. Here, as he followed the interesting ramifications of this subject, he found himself leaving the solid ground of observation behind him and venturing into speculative

pronouncements.⁷ This was intolerable to a man who was always supersensitive to the dangers of unchecked reason. But one phase of the working of the price system was open to investigation in realistic terms—the recurring readjustments of prices in the course of financial crises. These shifts, moreover, bore upon those problems of changing real output and consumption and shifting real incomes that had been objects of central concern in his study of the Civil War expansion. If adequate understanding of these recurring processes might be achieved, a contribution could be made to a kind of economic theory more satisfying than that yielded by introspection and the selective use of limited facts. So Mitchell turned to the study of business cycles.

The subsequent story will not here be told in detail. The search for an adequate understanding of business cycles was a search for valid economic theory. Mitchell's examination of accepted theories, his extended consideration of relevant thought and procedures in other scientific fields, and his own experience as an investigator led to conclusions respecting theory that have been set forth in various papers and that are embodied in his substantive work. Mitchell's persistent interest in the phenomena of business cycles carried through to his death, the two major publications subsequent to the 1913 monograph being *Business Cycles: The Problem and Its Setting*, in 1927, and *Measuring Business Cycles* (jointly written with A. F. Burns) in 1946. The founding of the National Bureau of Economic Research, in which Mitchell was a prime mover, was a direct reflection of Mitchell's deep-seated views as to the means by which adequate understanding might be achieved. The diversity of papers and brief monographs, notably the series of annual reports written by Mitchell as Director of the National Bureau, bore continuing witness to the freshness and seminal character of Mitchell's thinking, and reflected the searchings of a continually curious mind for light on the central problems that had concerned him from his early Chicago days. His quest was never finished, but his zest for it was unabated and unflagging.

Mitchell's concern, as J. M. Clark has suggested, has been with problems of concrete behavior. For these he sought interpretations in terms of "analytic descriptions."⁸ "A theory of business cycles,"

⁷ Cf. letter to Clark, p. 97 of this volume.

⁸ Cf. Clark, p. 199, below.

he wrote in the Preface to the 1941 reprint of Part III of his 1913 monograph, "must . . . be a descriptive analysis of the cumulative changes by which one set of business conditions transforms itself into another set." The theory providing such descriptive analysis would not be exhaustively detailed. The need of abstraction from the complexities of reality is clearly recognized by Mitchell. Conformity to the world about us and usefulness in the understanding of life processes are not inconsistent with conceptual simplicity. Mitchell's goal in the study of business cycles was the derivation of such a theory; his broader objectives were the confirmation of methods by which pragmatically tested theories might be derived and the establishment of agencies by which the research that might lead to such theories could be maintained and assured.

The road that Mitchell followed in seeking to establish theories that would serve as instruments of understanding was a hard road. Looking back over the fruitful years of his life, it is easy to overlook the valleys, the periods of trial and struggle when refractory reality would not fall readily into patterns that met his own exacting standards. Retreat into the spinning of speculations would have been an easy way out, for a mind as adept at that art as was Mitchell's. But this was a course he did not take. He worked over his materials again and again (" . . . I have to do everything a dozen times."); he sought new observations; he experimented with new patterns. Always there was the interplay and interaction of reason and observation; speculations were checked against data, data were organized in ways suggested by speculation. New observations were sought to check ideas suggested by other data; old observations were re-ordered under the play of an imagination that never lost its freshness. If there was one dominant quality in Mitchell it was the tenacity with which this procedure—the interplay of speculative reason and meticulously careful observation—was carried through. It is a procedure to which we all give lip service; Mitchell practiced it.

It is true that always the observations yielded an incomplete structure; always there were challenging new issues; always the work was unfinished. But this was of the essence of the reality from which Mitchell refused to get away. Not even for the aesthetic sat-

isfaction of deriving a harmoniously consistent, logically tight system—and Mitchell was a craftsman who loved nicely articulated structures—would he blind himself to aberrant observations. Not even for the joy of completing a lifework would he ignore any part of the complex reality with which he was dealing. Here was integrity—integrity that kept him at his testing and patternmaking until the day of his death, and that kept beyond his reach that final clean-cut termination of his job for which he had once hoped.

Mitchell framed no vast speculative system. He left no cosmology. No volume of "Principles" bears his name. His substantive contributions are embodied in four major monographs; his influence on economic thought and method was felt through these, through dozens of papers, addresses and reviews, and through hundreds of students. Some of the concepts and beliefs that shaped his research activities have been suggested above:

1. The emphasis on objective behavior as an object of study, as against the "intellectualist fallacy" of the nineteenth century.

2. The conception of economics as one of the sciences of human behavior.

3. A concern with reality, and a conviction that the objective of economics is the understanding of the institutions and processes by which men make their livings. All available instruments to this understanding should be utilized by the economist, but it is the understanding of reality and not the formulation of a body of concepts to be judged in terms of their own internal consistency which is the end-purpose of economics.

4. The belief that pecuniary institutions, and the money economy generally, provide keys of central importance to an understanding of contemporary economic processes.

5. The notion of sequence, the concept of cumulative, consecutive growth, as opposed to the Newtonian concept of equilibrium.

6. "The notion that inquiries should be framed from the start in such a way as to permit of testing the hypothetical conclusions"; profound belief in the interplay of reason and observation as the way to achieve warranted conclusions.

7. The confidence in statistical measurement as a means of ensuring the cumulative growth of a body of factual knowledge; such

quantitative, substantive knowledge would not only provide tests of hypotheses, but would constitute a seed-bed for the germination of new hypotheses.

These ideas (as here listed they overlap, of course) and related concepts that determined Mitchell's choice of problems and modes of study were derived in part from early teachers and from his studies in various fields; in part they reflected personal predispositions; as working instruments of his adult years they represented his own amalgam of thought and observation and his own mature judgments. From their application over half a century by a tenacious, questing, honest mind, actuated by a builder's instinct, came Mitchell's distinctive contributions to the body of economic knowledge, to the methods of economics, and to our present instrumentalities for the conduct of economic and social research.

The nature of these contributions will be the subject of appraisal in subsequent studies by Mitchell's fellow economists at home and abroad. In this brief memorial I suggest only the general nature of Mitchell's impact on the economics of his time.

His substantive contributions were extensive. No man did more to turn economists toward the study of the actual functioning of our economic system. The first great effort on business cycles, an extraordinary product of the zeal and energies of one man, yielded knowledge we had never before possessed of the phenomena of such fluctuations; the play of an imaginative and penetrating mind illumined and gave coherence to these phenomena. Subsequently, this body of organized information was extended in a massive and sustained research effort covering more than a quarter of a century. Many contributed to this accumulation and participated in the task of analysis, but Mitchell was the stimulator and the master organizer.

There were concrete contributions beyond the field of cycles. Mitchell was the captain of the team that launched the first comprehensive study of the amount and distribution of the national income. From this came not only a new body of knowledge vital to an understanding of economic activity; an enterprise was begun that was ultimately taken over by the federal government, and that, expanded and developed, provides today a great conceptual scheme for the organization and analysis of the facts of economic

life. The growth of the body of concepts and methods relating to national income and the concurrent development of a rich body of organized facts provide an ideal example of the kind of expansion of knowledge in which Mitchell believed and to which he devoted his life.

Finally we must note the additions to our knowledge of the details of the working of the money economy that derive from Wesley Mitchell. Veblen had stressed the role of pecuniary institutions in the behavior of men; Marshall had said that money is "the center around which economic science clusters"; Walras and Pareto had developed a model defining the interaction of prices in the attainment of market equilibrium. And many other economists had dealt with the money surface of things, often as a surface that obscured the play of real factors. Mitchell found great theoretical significance in the money aspect of economic processes. But to point this out was not enough. Characteristically, he labored to give substance to these ideas. From his earliest greenback study to his latest manuscript Mitchell was providing such substance. Giving realism to the idea of prices as a complex, interrelated system of many parts, with almost organic qualities of growth and change, Mitchell defined the characteristic modes of behavior of important elements of that system. The systematic study of prices, not primarily as specific equilibrium points in a conceptual network of supply and demand schedules but as measurable aspects of economic behavior, began with Mitchell.

Mitchell was a toolmaker, imaginative and ingenious in improving the technical instruments of research. His monograph on index numbers is still a classic in the field. In his own early work he developed novel techniques of cycle study, and he played a continuing part at the National Bureau in the refinement of these tools and the forging of others. He was not a mathematical statistician, but he had a lively interest in this rapidly developing subject and sought to utilize in his own work such of the tools and tests as he could employ with understanding and with assurance that they were relevant.

The perspective of time will be needed for an appraisal of Mitchell's influence on the body of concepts and analytical tools suggested by the term "economic theory." In the revealing letter

to J. M. Clark to which reference has been made Mitchell has described his own reaction to the traditional theory of his college days. He was impressed by the danger of speculation on the basis of assumed premises, except with reference to the simplest of problems, such as numbers and spatial relations. Where *phenomena* were to be explained one could not cut loose from them; here the "patient processes of observation and testing . . . of the relations between working hypotheses and the processes observed" were the roads to understanding. "Romances . . . utopias, and economic systems" (i.e., systems of economic thought) he loved, but he wanted to become a scientific worker.⁹

Theory, then, as an abstract system of thought which could not be tested against reality, had no place in Mitchell's working equipment. But theories as working hypotheses that can be checked against observations, as analytical devices that facilitate the organization of data, are to be sought and prized. These tools may be specific and limited; they may be comprehensive and far-reaching concepts; indeed an architectonic mind—and this Mitchell had in high degree—would be forever seeking the widest possible framework, the most comprehensive concepts, provided always that the framework fitted reality, that the concepts were open to testing and verification.

The body of ideas on which the economist might draw in deriving working hypotheses expanded, in Mitchell's thinking, as he matured and as his own experience broadened. The social sciences, the biological sciences, the sciences of the mind—all these furnish the economist with fruitful leads. Man's reciprocal relations with institutions of his own contriving, institutions which he has shaped and which in turn are shaping him, are of central concern to one who is attempting to define patterns of cumulative change in economic behavior and to develop a body of concepts for use in the study of economic processes. This body of concepts will be checked, modified, rechecked and again modified until there is conformity to the circumstances of economic life. A structure of ideas thus developed and thus adapted to reality would provide intellectual tools for the understanding of economic behavior.¹⁰

⁹ Letter to Clark, *op. cit.*

¹⁰ There is no one source in which Mitchell's views on economic theory are set

Although Mitchell's predilection was toward inductive procedures and constant verification, and although he reacted against the system building of the generation that preceded his own, he recognized virtue in a diversity of approaches to economic problems. He was intolerant of sheer abstraction which masqueraded as an explanation of reality. But for rigorous abstract reasoning as a stage in the process of inquiry he had the fullest respect. There was room in economics for the exercise of many skills; economics was to Mitchell a house of many mansions.

III

To the picture of Wesley Mitchell the tenacious investigator, the brilliant expositor, the inspiring teacher, there must be added a

forth in rounded form. Certain of his essays deal more explicitly with these matters than do his extended works. Three papers reprinted in *The Backward Art of Spending Money and Other Essays* are of direct interest: "The Role of Money in Economic Theory," *American Economic Review*, Supplement, March 1916; "The Prospects of Economics," from *The Trend of Economics*, edited by R. G. Tugwell, 1924; "Quantitative Analysis in Economic Theory" (Presidential address delivered at the 37th annual meeting of the American Economic Association), *American Economic Review*, March 1925.

To these we might add "Wieser's Theory of Social Economics" (*Political Science Quarterly*, March 1917; also reprinted in *The Backward Art of Spending Money and Other Essays*). In expounding Wieser's theory, Mitchell makes clear many of his own ideas on the scope and character of a useful body of economic theory.

Not explicitly devoted to theory, but of high significance for the light they throw on Mitchell's basic conception of theory, are chapters on institutional settings in his 1913 and 1927 books on *Business Cycles*. In the earlier book the chapter is entitled "The Economic Organization of Today"; in the later, "Economic Organization and Business Cycles."

Mitchell's opinions as they stood in 1918 were rather systematically, although informally, developed in the terminal lectures in his course on Types of Economic Theory, in which he propounded a modern ground plan for economic theory. Notes on these lectures exist, but they were never edited by Mitchell, or approved by him. In these lectures Mitchell sketched a general framework in which economics was presented as one of several sciences of human behavior, the special concern of economic science being the growth and present functioning of economic institutions. Into such a framework all the traditional types of economic theory, as well as types involving other approaches to the study of economic institutions and processes, could be fitted, in Mitchell's view. Most of the orthodox theories, for example, would fit into such a scheme as studies of the logic of pecuniary institutions.

few strokes at least to depict other sides of a singularly balanced human being. There was a Puckish quality in Mitchell reflected in his youthful (and enduring) love of paradox. Even in his advanced years he could view with impish glee Irving Fisher's soberly framed rules of health; he used tobacco with special gusto because Fisher banned it. He enjoyed the play of Veblen's scalpel, dissecting and undercutting pretentious systems of thought. But his mind was not essentially that of the skeptic, and particularly not that of the mocking skeptic. Having no pretense himself, he could be scornful of pretentiousness. But there was no scorn for honest endeavor, whether successful or not.

Mitchell found deep satisfaction in his home life. He and his wife shared an interest in education, and sponsored one of the most fruitful of the experiments that helped to break the education of the young out of the moulds of nineteenth-century custom. He joyed in the companionship of his children. In their New York home and at Huckleberry Rocks, in Vermont, there was a healthy, wholesome family atmosphere. The children were partners of the parents in the life of the Mitchell household. At Huckleberry Rocks, too, there was a workshop to warm the heart of one who respected the arts of woodworking. Here Mitchell could indulge to the full his love of fine craftsmanship. He was as skilled and honest in the tasks of cutting, sawing and fitting a delicate piece of inlay work as he was in assembling economic observations and fitting them into a meaningful structure. Here, also, was his study, with contents ranging from scholarly tomes and slim books of verse to the latest detective fiction, of which contrivances Mitchell was a connoisseur. In this home, in its activities and interests, its responsibilities and its joys, there were wells of contentment for Mitchell. Here were some of the deep sources of his strength.

Wesley Mitchell's life was a full life and he was, in truth, a whole man. He found in life the abiding satisfactions that go with integrity of mind, generosity of spirit, and service to a cause that can draw man out of himself and beyond himself. In his life's work Mitchell served the human race. In his own being he helped to give dignity to that race.