

To Kara, Andrew and Jim with love

The Revival of Laissez-Faire in American Macroeconomic Theory

A Case Study of the Pioneers

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1. Introduction

The principle of laissez-faire endures as a compelling idea in economic thinking. In essence, this standard suggests that, in economic affairs, a harmony of public and private interests exists such that maximum social welfare is guaranteed given individual choice in free markets. Its attraction is manifold. Economic theories premised on individual maximization in free markets assure determinant solutions. Corollary policy recommendations are simple and direct: the scope for government intervention is limited to the provision of a legal framework to maintain competition and of limited public goods such as defense and education. In relation to philosophy, laissez-faire connotes a natural design principle that appeals to the search for an underlying order of natural law.¹ In relation to social philosophy, laissez-faire complements the democratic ideal of individualism with its emphasis on the primacy of private choice in all decisions.

Thus it is not surprising that laissez-faire would serve as a standard in the minds of economists as they construct theories with corollary policy recommendations. And in fact the development of American economics in the twentieth century substantiates this position.²

At the turn of the century, the majority of American economists accepted the notion that the research of Alfred Marshall and John Bates Clark had produced a 'satisfactory logical synthesis of the older classical and the utility school doctrines', a union which had preserved the laissez-faire doctrine as a point of departure in policy considerations (Dorfman 1959:5, p. 464). At the same time, American economists confronted contemporary industrial conditions that evidenced increasing concentration of business enterprise and mounting dissatisfaction of the working class. In response, initially they focused on microeconomic phenomena, constructing theories that recommended selective government intervention in particular industries (Dorfman 1949:3, p. 352). With the onset of the Great Depression, research extended to macroeconomic concerns. American economists worked from the Investment-Saving Liquidity-Money (ISLM) model developed by John R. Hicks

(1937) and Alvin Hansen (1953) in their reinterpretation of the economics of John Maynard Keynes (1936) to reject laissez-faire in favor of discretionary stabilization policy. By the 1960s this model served as the standard for macroeconomic analysis, and researchers concentrated on finding more precise functional relationships among dependent and independent variables in order to facilitate fine-tuning of the national economy (Klamer 1983, p. 2).

In startling contrast, beginning in the 1970s a presumption in favor of laissez-faire once again became the predominant policy recommendation in macroeconomics. From monetarism³ to public choice theory⁴ to new classical macroeconomics⁵ the trend was the same. Laissez-faire no longer stood as the exceptional policy for recommendation in rare occurrences of competitive markets; rather it represented the optimal policy standard for approximation in fact or by design.

Thus over the course of the twentieth century, while the ideal of laissez-faire remained a touchstone in the thinking of economists, a dramatic change in attitude toward this doctrine unquestionably occurred. The intriguing question becomes why this remarkable evolution has taken place. Can economists attribute it to the internal development of analytic tools and methods that induced them to develop novel theories, which recommended laissez-faire policies rather than public intervention? Did an external economic problem lead economists to ask new questions with theoretical responses that recommended private control? Or did economists succumb to the influence of the conservative ideology that began to spread through America during the last quarter of the century?

Macroeconomists themselves offer all three views as explanations for the revival of laissez-faire. For example, Harry G. Johnson attributed the rise of monetarism to an external social problem:

It is no surprise that the appearance of monetarism as a strong intellectual movement has had to wait until the aftermath of the escalation of the war in Viet Nam in 1965. It is even less of an accident that its current success has depended on a prior Keynesian claim to, and acceptance of, responsibility for efforts to stop inflation by Keynesian fiscal means . . . [Keynesian economics] encountered disaster when it tried to sell reverse Keynesian policies to a non-Keynesian problem [inflation]. And the monetarist counter-revolution has been cashing in on that mistake of intellectual strategy. (Johnson 1971, pp. 7–8)

Robert E. Lucas, Jr, Nobel Laureate and new classical economist, credited the ascent of his school to theoretical developments: 'Recent macro-

economic controversy seems to me much more easily interpreted as a surface manifestation of much deeper and more important developments in economic theory' (Lucas 1987, p. 1). James Tobin, Nobel Laureate and Keynesian economist, conjectured that the revival of *laissez-faire* in macroeconomics reflected the influence of the general tide of conservatism that surfaced in the 1970s:

Economists know the restrictive conditions of these proofs [of the theory of general competitive equilibrium]; they can list the standard caveats and qualifications. These are lost in the arena of the politician and public opinion, and they are increasingly glossed over by economists themselves. At the same time and for the same reason that conservative ideology was gaining public favour, its counterpart in economic theory was being more and more uncritically accepted throughout the economics profession. (Tobin 1987, p. 70)

Acceptance of any of these suppositions regarding the origins of the return to *laissez-faire* implies much regarding the character of economics. For if this change occurred in response to new tools or methods, then the revival of *laissez-faire* emerges as analytically based. If this change occurred in response to theoretical resolutions of contemporary economic problems, then the revival of *laissez-faire* materializes as a convergence of the analytic and the ideological. In this case, the analyst draws on his judgment as to what constitutes a social problem and the proper method to obtain its solution and then selects analytic techniques to conduct his investigation. If the evolution occurred in response to ideological influences, then the analytic character of economics is called into question. Discriminating among these contradictory claims becomes critical in identifying the appropriate role the models recommending *laissez-faire* should fulfill in policy debates. For an analytically based recommendation for *laissez-faire* is of an entirely different character than an ideologically based one, and decision-makers should assess alternative policy actions with that knowledge in hand. Thus with the objective of distinguishing among these conflicting claims, this book will provide an interpretation of the evolution of the stance on *laissez-faire* on the part of some leading thinkers in twentieth-century American economics.

Perhaps the most fertile field for this analysis comprises the writings of those pioneers who dominated the origination and diffusion of ideas that sustained the *laissez-faire* doctrine over the course of the twentieth century in America. First, the debate regarding the revival of *laissez-faire* has been both confusing and acrimonious, and, as such, would

benefit from clarification.⁶ Second, an interpretation of the cases made by the pioneers for laissez-faire provides a means to uncover whether the revival occurred due to significant theoretical developments, external challenges or ideological influence. Third, analysis of this research will reveal much about the intellectual process of economic theorizing, in particular, how economists incorporate new tools, methods and external challenges into their models. With these objectives in mind, this book will reconstruct the cases for laissez-faire developed by early pioneers – Frank Knight, Henry Simons and Friedrich von Hayek – to serve as reference points for later ground-breaking research conducted by Milton Friedman, James M. Buchanan and Robert E. Lucas, Jr.

In carrying out their research all of these individuals used some variety of neoclassical economics. The models constituting neoclassical economics originated in the research of the economists William Stanley Jevons ([1871] 1965), Leon Walras (1874), Carl Menger (1871) and Alfred Marshall ([1890] 1920). These innovating economists had constructed a new paradigm in response to their observations of continuing aggregate growth coupled with persistent poverty and the apparent inability of classical economics to explain this phenomenon.⁷ In constructing the neoclassical paradigm they merged a new theoretical perspective, the role of utility in the determination of value, with a mathematical tool, the concept of the marginal increment, to study the workings of competition. A revolutionary reorientation in economic theory ensued such that a microeconomic focus on the optimal allocation of given resources among alternative uses replaced the earlier classical focus on aggregate growth. On the basis of this research, these economists attributed the observed defects in the competitive order to external factors – a lack of general education and rare instances of market failure. Consequently, they continued general recommendation of laissez-faire supplemented with increased public support of education and selective public intervention to regulate or administer commodity provisions in imperfectly competitive markets.⁸

In developing this paradigm, the neoclassical economists responded to their value judgment that the problem of poverty in the midst of plenty constituted an appropriate object of economic analysis. In their choice of marginal analysis they certified the importance of individual choice as the foundation of economic investigation. Moreover, in their general recommendation of laissez-faire, the marginalists attested to the inherent stability of the competitive economic system. In interpreting the research of the laissez-faire pioneers, it is crucial to remember that

they implicitly accepted the value judgments of the developers of the neoclassical paradigm. Yet at the same time, this acceptance did not imply that the laissez-faire pioneers erased their personal value judgments from their research. Rather, just as the founders of neoclassical economics drew on their value judgments to select the elements of their novel paradigm, the laissez-faire pioneers drew on their value judgments to decide on the direction of their subsequent research. When doing so, they determined which theories required extension and the research methods appropriate to that task, decisions that were colored both by their individual perceptions of prevailing intellectual, political and social trends and contemporary economic problems and their membership in a particular community of practitioners.⁹

Thus in interpreting the research of the laissez-faire pioneers, I will devote particular attention to two aspects of their work. First, I will make explicit the pre-analytic foundations of their research, including the pivotal value judgments they made when setting its direction.¹⁰ Second, I will investigate the social relations among the pioneers, as teachers, as students, as colleagues, as fellow economists. In those steps, I will possess a means to evaluate the possibility of the influence of external challenges and ideology, as well as theoretical developments, on the revival of laissez-faire.

NOTES

1. See Charles M.A. Clark (1992) for an extended discussion of the relationship between natural philosophy and economics.
2. Numerous analysts have studied the place of laissez-faire in American social thought. See for example Goldman (1952) and Fine (1964) for discussions of the departure from advocacy for laissez-faire in American thought beginning with industrialization after the Civil War and up until the reform movements leading to Roosevelt's New Deal.
3. Friedman led the way in developing the monetarist model as a counter-example to the ISLM analysis. In essence, Friedman used the theory of consumer choice to argue that the demand for money was fairly stable over time. He revived the quantity theory of money to establish that changes in the nominal quantity of money can lead to short-term, but not long-term, changes in the levels of output and employment. On the assumption that the monetary authority can control the nominal supply of money, monetarists recommend the institution of a money-growth rule to prevent money from becoming a disturbing force in the aggregate economy. For further details of analysis see Chapter 5.
4. Buchanan led the way in developing public choice theory, which extends the postulates of neoclassical price theory to the analysis of political behavior. In essence, the theory suggests that the self-interested motives of politicians and constituents induce politicians to vote for inflationary budget deficits. As a result, public choice theorists

recommend the passage of a balanced-budget amendment in order to replace the discretionary authority of politicians with a laissez-faire framework of rules. For further details of this analysis see Chapter 6.

5. Lucas played a leading role in developing new classical macroeconomics, which employs the rational expectations hypothesis and general equilibrium analysis to reconcile the natural rate hypothesis developed by Friedman (1966 and 1968a) and Edmund Phelps (1967) and the theory of business cycles. Models based on these premises suggest that discretionary fiscal policy is both ineffective and leads to greater instability; hence indicative of the principle of laissez-faire, the government's proper role constitutes the provision of a framework of rules to enable steady economic growth. For additional details of these models, see Chapter 7.
6. See Arjo Klamer (1983) for a recounting of conversations he had with leading members of the new classical, Keynesian, monetarist, Marxist and post-Keynesian schools of macroeconomics. Brian Snowdon et al. (1994) added conversations with representatives of the real business cycle, new Keynesian and Austrian schools. Snowdon and Howard R. Vane (1999) updates Klamer's conversations. All of these exchanges summarize the issues and reflect the acrimonious quality of the debates about macroeconomics during the last quarter of the twentieth century in America.
7. Thomas S. Kuhn developed the notion of a paradigm in conjunction with his theory of the discontinuous growth of knowledge in the natural sciences. On a technical level, a paradigm represents 'universally recognized scientific achievements that for a time provide model problems and solutions to a community of practitioners' (Kuhn [1962] 1970, p. viii). On a sociological level, a paradigm represents 'the entire constellation of beliefs, values, techniques and so on shared by members of a given community' (Kuhn 1962, p. 175). A paradigm originates in 'extraordinary' research that members of the community undertake to resolve an apparent anomaly between theory and fact that analysts could not solve using existent techniques. In developing the paradigm these individuals explicitly or implicitly incorporate their beliefs and values about the surrounding world, views that necessarily reflect factors external to the scientific community. Practitioners of 'normal science' go on to refine, extend or articulate the paradigm, implicitly accepting the values, beliefs and techniques that entered into its development.
8. Ellen Frankel Paul has argued that the apparent inconsistency of their supplementary policy proposals with the doctrine of laissez-faire followed from a change in the ethical base of laissez-faire from Adam Smith's natural rights position to Jeremy Bentham's utilitarianism. In essence, the theories the neoclassical innovators developed of particular sectors of the economy demonstrated that public provision of certain goods and services assured a greater happiness for a greater number of citizens than private provision. On that basis, they could consistently recommend laissez-faire and selective intervention in the economy (see Paul 1979).
9. Note that this approach of interpreting the research of laissez-faire pioneers implicitly rejects the notion of value neutrality inherent in the positive-normative dichotomy put forward by many neoclassical economists. Ernest Nagel (1961) and Mark Blaug (1992) offer support for the possibility of value neutrality in scientific research. In contrast, Kuhn ([1962] 1970), Joseph Schumpeter (1954), Gunnar Myrdal (1944, 1958, 1961, and 1968) and Hans E. Jensen (1976) provide arguments for my view on the value permutation inherent in scientific research.
10. I have adopted the term 'pre-analytic' from Schumpeter who contended that all economic analysis 'begins with the material provided by our [pre-analytic] vision of things' (Schumpeter 1954, p. 42). Schumpeter argued that this vision guided the analyst in 'visualiz[ing] a distinct set of coherent phenomena as a worthwhile object of analytic efforts' (Schumpeter 1954, p. 41).

2. Frank Hyneman Knight, the moral philosopher

It is fitting to begin the analysis of the revival of *laissez-faire* by concentrating on the research of Frank Hyneman Knight (1885–1972). Both members and analysts of the Chicago School assert that he assumed the organizing role in the development of its version of the doctrine of *laissez-faire*. For example, ‘participant-observer’ Melvin W. Reder observed that Knight’s ‘contribution to the Chicago tradition was that of sage and oracle’; he was ‘the “baton-passer”’ due to his immense ‘personal impact on a few influential students’, including Simons and Friedman, that went on to form a ‘Knight affinity group’ (Reder 1982, pp. 1, 6 and 7). Analyst John Henderson observed that Knight was ‘the moving spirit of the Chicago point of view, fostering . . . a strict *laissez-faire* philosophy’ (Henderson 1976, p. 355).

Knight came of age during the progressive era of American history. Not all members of society shared in the unparalleled prosperity created by American industry during the second half of the nineteenth century. Thus politically it became a time when

The spirit of reform took possession of the country. The question was not whether to change or not to change, but how to change. Counsels were widely divided between encouraging and destroying trusts, between centralizing and decentralizing the financial system, between expanding and limiting labor unions, between stimulating and stabilizing free enterprise. The one premise upon which nearly all reformers agreed, although not consciously, was the intervention of government in economics. (Dorfman 1949:3, p. 342)

The debate took place in an intellectual environment distinguished by a cross-current of ideas. Eighteenth and early nineteenth-century philosophers had bequeathed an atomistic, mechanical conception of society in which social development was subject to natural law¹ and utilitarian individualism.² This view was challenged by the newer evolutionary image of society in which social processes interacted with environmental conditions subject to the principles of natural selection³

and pragmatism.⁴ Thus, as a backdrop to his maturing, Knight was surrounded by a political tension underlying the identification of the proper scope of government control in a society which could not guarantee improved material benefit to all members. Simultaneously, the intellectual environment in which this debate was framed presented starkly divergent pictures of that society.

Knight's early career coincided with the First World War and subsequent industrial reconstruction. As it did with every segment of society, the war had a decided impact on the ensuing development of the economics profession. For the first time the federal government put into place a systematic organization for the collection of national statistics, providing a more adequate database for the study of economic phenomena. During the war the national government had solicited professional expertise concerning price controls, war financing and production planning. Though often consulted belatedly, economists' success in some measures indicated a beginning role for experts in contributing to social planning (Dorfman 1949:3, pp. 493–4). At the same time, the initial success of the German war effort indicated to some that centralized government planning was not always benign in its outcome.⁵

Yet, even with beginning recognition of their unique advisory capacity by outsiders, pluralism in ideas and in method characterized the profession.⁶ First, economists employed a variety of methods, selecting the one best suited to answer the particular question under investigation: 'an economist was an investigative scientist whether he or she used the methods of history, statistics, theoretical deduction, empiricism, mathematics or whatever. There was no hegemony of method' (Morgan and Rutherford 1998, p. 6). Second, economists focused the bulk of their research on solving problems, rather than developing abstract theories and conducting econometric tests of them. Third, the scientific status of analysis was associated with the personal integrity of the researcher, rather than a particular set of methods. Finally, economists did not aim to conduct value-free analysis, because a variety of methods led to a variety of results: 'It became the professional ethos of economists of the period to teach both sides of the case . . . Professionalization demanded evenhandedness' (Morgan and Rutherford 1998, p. 8). Since several alternatives often emerged from analysis, the economist did serve as an advocate in public policy debates, 'but only if his or her views were buttressed by objective scientific inquiry' (Morgan and Rutherford 1998, p. 8).⁷

It was only natural that Knight became involved in the debate about

the proper scope of government activity in the economy and in his own fashion provided direction to analytic economics and concomitant policy. In particular, he developed a theoretical case for laissez-faire based on his analysis of the model of perfect competition and competing modes of economic organization. In the process Knight assumed a leadership role in founding the Chicago School whose members consistently have provided a sympathetic forum for debates concerning the role of the laissez-faire doctrine even as their approach to analytic economics evolved over the twentieth century.⁸

PRE-ANALYTIC FOUNDATIONS OF KNIGHT'S CASE FOR LAISSEZ-FAIRE

Prior to reviewing the research that became the basis for Knight's case for laissez-faire it is necessary to sketch his views on the proper role of the economist, philosophy, human nature and the appropriate method for economic research. Like his contemporaries, he understood his professional role as that of evenhanded advocate. In philosophical studies, Knight developed a conception of the character of change that anteceded his idea of uncertainty. He applied his philosophical ideas to develop a pluralistic theory of human nature and conduct, a notion that influenced his views regarding the social aspects of economic activity and the proper method for ethical analysis. Finally, Knight devoted much time to an exploration of the methodological debates occurring among institutionalists, behaviorists and positivists during the first decades of the twentieth century. The choice he made regarding the proper research method set the direction of his subsequent work and influenced his views regarding how society could use knowledge in social control of economic activity.

Knight was born in McClean County, Illinois, the eldest son of a farm family. Due to the family's meager financial circumstances, he was not able to seek higher education until his early twenties, and he had to find his own way to fund it. He commenced his studies at two evangelical colleges in East Tennessee, American University and Milligan College, and he graduated with a bachelor's degree in natural sciences and a master's degree in German from the University of Tennessee at Knoxville.⁹ Knight began his formal study of economics at Cornell University in 1914, coming with a rich educational background of philosophy, history, languages and general science. Originally he

selected ethics as his major course of study with minors in logic, metaphysics and economics. But members of the philosophy department discouraged this choice due to their concerns about his 'ingrained skepticism'. Orthodox economist and reformer Alvin Johnson recognized Knight's potential and quickly persuaded him to join the economics department at Cornell. Knight's other teachers and later advisers included Allyn Young, Herbert Davenport and John Maurice Clark,¹⁰ all of whom combined intellectual prowess with a commitment to refine the neoclassical model (Dorfman 1959: 5, pp. 467–8).

Knight's comments about the professional role of economists suggest that he emphasized the supreme importance of evenhandedness in the pluralistic environment of economics in which he found himself during the early years of his career. For example, he considered that 'the "practical" justification for the study of economics was a belief in the possibility of improving the quality of human life through changes in the form of organization of want-satisfying activity' (Knight 1921, p. vii). In that pursuit Knight assigned the economist the particular role of 'providing a necessary element of impartial intellectual-moral leadership' in discussions of social action aimed at improving the quality of life (Knight 1935a, p. 359). To realize that role the economist, above all, must display evenhandedness, that is a 'dispassionate objectivity . . . "devoting" [himself] to a truly cooperative quest of the right or "best" ' solutions for problems, absolutely renouncing interest in individual prominence and power, and going to the public only with dispassionate statements of fairly established results' (Knight 1935a, pp. 357–8).

Knight's determination to serve as a dispassionate economist-intellectual appeared to reflect his puzzling over what role intellectual currents such as positivism, pragmatism, socialism or scientism should play in the consideration of economic phenomena and social control.¹¹ For example, in the 1921 preface to *Risk, Uncertainty and Profit* Knight stated

the writer cherishes, in the face of the pragmatic, philistine tendencies of the present age . . . the hope that careful, rigorous thinking in the field of social problems does have some significance for human weal and woe. (Knight 1921, p. vii)

Similarly, in 1933 he declared that

Social 'science' and economics have not at all withstood the general movement, the natural implications of utilitarianism, scientificism, instrumentalism.

The best we can hope is that a few people will learn the lesson and carry it forward to another historical juncture, when the 'other man,' who is, after all, likewise in humanity, the lover of truth and right, and of mutuality and real co-operation, may get another chance. (Knight 1933b, pp. xxxv-vi)

In 1948 he stated

For the visible future, the problems of modern civilization are to be solved only through striving for the best possible compromise among conflicting goods and associated evils. Responsible citizenship calls for a rather terrifying amount of intellectual and moral equipment. (Knight 1948b, p. 1)

Knight's devotion to achieving his standard of a dispassionate-intellectual became the value judgment guiding his research. In that capacity he devoted his energies to a consideration of a wide range of topics from neoclassical economic theory to ethics to philosophy and religion. Further in his 'quest for "best" solutions', Knight demonstrated an openness to new ideas on all sides of contemporary debates (Knight 1935a, p. 357). As a result, a review of his research reveals both pluralism in method and changes in his thinking, from his reinterpretation of capital theory in the 1930s to his evolving assessment of the merits of the free enterprise system.

The aim of philosophy as Knight conceived it consisted of 'mak[ing] experience intelligible' (Knight 1913b, p. 3).¹² Experience consisted of two factors: an 'unchanging or uniformly changing and universal element' which Knight alternately called the object, substance or the world, and a 'variable, plural individual element' which he alternately called the subject, causality or the self (Knight 1913b, p. 47). In Knight's estimation, the variable or changing aspect of experience presented the philosopher with his chief problem. For to make experience intelligible, he needed 'to discover unity in the manifold, an identity in its difference' (Knight 1913b, p. 6). In this pursuit philosophers had taken two routes. Either they had attempted to explain the world in purely objective terms, or they had sought to interpret experience in purely spiritual or subjective terms. Knight believed that both attempts were doomed, because philosophers could not reduce experience to either objective or subjective elements. Rather they had to define subjective and objective elements in terms of each other, and in that way they became correlative or relative ways of understanding experience instead of being absolute ways of explaining experience.

To illustrate this point Knight offered an example from physics.

Matter, the physicist's proxy for an objective element, was defined in terms of space occupied, though no reference was made to the quantity of space occupied. Instead, matter was measured in terms of force, the physicist's proxy for a subjective element. Thus the 'only way we are given of finding out how much matter we are dealing with is by the amount of force', that is the objective element became correlated with the subjective element in explaining the world (Knight 1913b, p. 12). Knight believed that because the subjective element was 'necessary to constitute [the objective world] as real', the correlation between subjective elements and objective elements became the 'irreducible element of unintelligibility' (Knight 1913b, p. 45). Thus, while the philosopher was able to make experience intelligible by discovering a 'time-unity' in many aspects of change, he always had 'to deal with a factor of real change which was not intellectually cognoscible' (Knight 1913b, p. 46).¹³

Knight applied his philosophical ideas to develop a pluralistic theory of human nature and conduct.¹⁴ Knight began to develop this idea in 1921 when he classified conduct according to its rational and its 'impulsive and capricious' or non-rational features (Knight 1921, p. 52). Rational conduct occurred in conjunction with problem-solving situations whose outcomes were known with a high degree of dependability. Thus rational conduct was directed 'to the satisfaction of wants conceived as given and permanent entities' and was motivated by a desire for maximum utility, 'the power of things to satisfy conscious wants' (Knight 1921, pp. 54 and 61). Non-rational conduct occurred in conjunction with problem-solving situations whose outcomes were unknown (Knight 1921, pp. 51–2). In later writings he expanded on this idea of non-rational conduct to point out that it was directed to satisfy wants motivated by aesthetic appeal, social and cultural standards and a desire for interesting experiences (Knight 1933b, p. xiv).

Knight developed an analogous pluralistic theory of human nature. He conceived of human nature as composed of various drives or urges. In early writings he highlighted the game attitude, which was an urge to competitiveness, and the economic attitude, which was a means to efficiently achieve ends by use of means (Knight 1921, pp. 52–3). Subsequently he added a distinctive human urge to learn (Knight 1933a, p. 18) and a religious attitude, which was an urge to devote oneself to the group as conceived as a '“mystical” entity' (Knight 1935a, p. 321). In later writings he drew on his philosophical discussion of the development of consciousness to explain that the specific forms of these drives

arose out of a process of 'unconscious drift' as the human species unconsciously and mechanically interacted with its social inheritance of custom, mores and institutions (Knight 1948a, p. 283). Later as consciousness became more fully developed, humans strove purposively to influence this evolution through the use of intelligence (Knight 1948a, pp. 285–6). Yet Knight advised that the 'new traits [were] superimposed on an extending [human] nature, without, in the main eliminating the earlier' (Knight 1948a, p. 285). Thus Knight conceived of human nature as containing omnipresent, universal tendencies, yet, whose degree of dominance over conduct evolved according to the influence of social inheritance, environmental factors and intelligence.

When Knight began his economic studies he recognized the pluralism in method typical of the interwar period. One extreme consisted of 'mathematical and pure economists', individuals such as Vilfredo Pareto 'to whom little if anything outside a closed system of deductions from a very small number of premises assumed as universal laws is to be regarded as scientific economics at all' (Knight 1921, pp. 5–6). At the other extreme were the institutionalists, also called practitioners of the new economics, who 'repudiate abstraction and deduction altogether' (Knight 1921, p. 6). In later work he extended his methodological studies to the behaviorists (see Knight 1923).

Yet, despite the many possibilities available, Knight did not advocate significant substantive changes in method; rather he intended to find a 'middle way' between mathematical and historical methods that continued the neoclassical tradition of adapting the methodology of theoretical physics to the study of economic phenomena (Knight 1921, p. 6). He resolved to develop a clear statement of the scientific method as applied to the consideration of economic phenomena 'to make its nature and limitations explicit and clear' (Knight 1921, p. 5). His contribution originated in the idea developed in his philosophical studies that it was impossible to make experience intelligible in purely objective terms. He drew on this idea to establish the limitations of the scientific method in economics.

Knight defined the scientific method as 'the complete and separate study of general principles, with rigid exclusion of all fluctuations, modifications, and accidents of all sorts due to the influence of factors less general than those under investigation at any particular stage of inquiry' (Knight 1921, p. 9).

To accomplish this study, scientists reduced 'to order a complex mass of interrelated changes . . . to uniformities of sequence or behaviour called laws' (Knight 1921, p. 4). Using the canons of formal logic, they

reasoned from these simplified postulates to develop ‘statements of what “tends” to hold true or “would” hold true under “ideal” conditions, meaning merely in a situation where numerous and variable but less important “other things” which our laws do not take into account were entirely absent’ (Knight 1921, p. 4).

Finally, scientists compared these simplified, theoretical tendencies with complex, actual situations. The knowledge gained in this comparison was twofold. First, it provided a base by which to check the validity and, if necessary, to revise initial premises, and, second, it enabled scientists ‘to deal with practical problems intelligently because [the theoretical constructs] were approximately true and [they knew] how to discount their incompleteness’ (Knight 1921, p. 5).

Knight emphasized both the possibilities and limitations of applying the scientific method to the analysis of economic activity. He contended that economic theory could furnish abstract, universal laws, such as diminishing returns and diminishing utility, which generalized the form of economic behavior associated with rational activity (Knight 1924, p. 135). Yet he cautioned that when abstracting these laws, the economist, rather than conducting artificial experiments to isolate key elements, had to rely on ‘common sense or intuition’ (Knight 1921, p. 7n). These laws apprehended ‘characteristics so obvious that it is impossible to escape recognizing them and so fundamental that to think them away would necessitate creating in the imagination a different kind of universe’ (Knight 1924, p. 136). Knight believed that this reliance on apriorism made it even more crucial for the economist to check his logical processes as the primary means to validate theory.

Knight did not believe that economists could adapt the scientific method as a basis for prediction and control of the economic system. For when economists applied the scientific method to develop a theory of prediction relevant to human phenomena, its limitations became quickly evident. First, the scientific method could not model the conscious process of thinking essential to human existence because

Instead of progressing toward the condition of unconscious automata, we are called upon constantly for more thinking, the mental strain involved in conscious as compared with unconscious activity increases continuously, and the mysterious liability to error which is characteristic of conscious responses in contrast with mechanical adjustments grows greater instead of decreasing. (Knight 1924, p. 110)

Second, the ‘mentally unmanageable complexity of manifoldness of the things which make up our world, and their habit of apparent change’

made discovery of statistical economic laws effectively impossible (Knight 1924, p. 112).

In essence, Knight maintained that when the economist correctly applied the scientific method to the consideration of economic phenomena, he could develop universal laws to structure his thinking 'about particular ends in view and means at hand' (Knight 1924, p. 138). At the same time, since human consciousness and the complexity of the human condition prevented the economist from making experience fully intelligible in objective terms, he simply could not develop predictive laws.

KNIGHT'S EFFICIENCY-BASED CASE FOR LAISSEZ-FAIRE

Knight initially justified laissez-faire with an efficiency-based argument:

When viewing society, then, as a want-satisfying machine and applying the single test of efficiency, free enterprise must be justified if at all on the ground that men make decisions, exercise control, more effectively if they are made responsible for the results of the correctness, or the opposite, of these decisions. (Knight 1921, p. 358)

He reached this conclusion by applying his notion of uncertainty to the consideration of the behavior of those individuals who made decisions about production and investment in laissez-faire and socialistic systems.

Knightian Uncertainty

Knight developed his theory of uncertainty in the context of his extension of the neoclassical theory of profit. In this research, he intended 'to make . . . a fuller and more careful examination of the role of the *entrepreneur* or enterpriser, the recognized "central figure" of the system, and of the forces which fix the remuneration of his special function' (Knight 1921, p. ix). Two factors motivated Knight to undertake this project. First, his extension of the theory of profit would provide an exemplar of the proper way to use abstract deductive reasoning when analyzing economic phenomena. He aimed 'to state the essential principles of the conventional economic doctrine more accurately, and to show their implications more clearly, than has previously been done' (Knight 1921, p. vii). Second, he intended 'to isolate and define the essential characteristics of

free enterprise' to respond to those of his contemporaries who were advocating greater social control of economic activities by providing them with the

necessary foundation for answering the question as to what is reasonable to be expected of a method of organization, and hence of whether the system as such is to be blamed for the failure to achieve ideal results, of where if at all it is at fault, and the sort of change or substitution which offers sufficient chance for improvement to justify experimentation. (Knight 1921, p. viii)

Thus, Knight implicitly approached his investigation of laissez-faire from a conservative perspective in the sense that he opted for preserving the status quo until investigators had garnered sufficient information to judge whether changes in the organization of economic activity would improve existing arrangements.

As the first step in his investigation of profit, Knight reconstructed the neoclassical models of perfect exchange of finished products, of perfect competition with organized production and economic dynamics under known laws of change to determine which premises were essential to guarantee a theoretical tendency toward a 'perfect, remainderless distribution of the product of industry among the agencies causally concerned in creating it' (Knight 1921, p. 172). In the model of perfect exchange, the essential condition for profitless exchange consisted of 'perfect intercommunication, which is to say perfect knowledge of what they are doing on the part of all exchangers' (Knight 1921, p. 86). In the model of perfect competition, the essential condition for profitless production and exchange required 'that men *know exactly what they are doing*, that no uncertainty is present' (Knight 1921, p. 94). In the dynamic model of perfect competition, the essential condition for profitless equilibrium required that agents could foresee all changes or that 'all the alternative possibilities are known and the probability of occurrence of each [change] can be accurately ascertained' (Knight 1921, p. 198). Thus with respect to the reconstructed models of perfect exchange, perfect competition and economic dynamics, Knight designated the postulate of perfect knowledge as the essential theoretical condition to assure a tendency toward profitless distribution.

In highlighting the postulate of perfect knowledge as the key to understanding profit, Knight followed the approach of earlier neoclassical theorists. For example, in the first part of *Risk, Uncertainty and Profit* Knight had acknowledged J.B. Clark's correct attribution of profit to the forces of dynamic change, and he also had accepted as a starting

point F.B. Hawley's characterization of profit as a reward for risk (Knight 1921, pp. 47–8). Nonetheless, later in his argument, Knight also made clear that the relaxation of other theoretical simplifications, such as the assumption of the perfect divisibility of resources or perfectly free competition, could also explain the existence of profit (Knight 1921, pp. 174–94). The interesting question becomes why Knight emphasized the role of uncertainty, and in *Risk, Uncertainty and Profit* he provided no clear answer. Yet upon reflection, referring back to Knight's understanding of the problem of philosophy provides a clue as to why the concept of uncertainty played such a prominent role in his analysis. For in that context he had stated that understanding the effect of 'change is the fundamental problem of thought' (Knight 1913b, p. 31). It is not hard to imagine that Knight would transfer his philosophical concern for understanding the effect of change to a fundamental problem in economics.

Given that the absence of perfect knowledge was the key to explaining profit, Knight initiated a study of 'the theory of knowledge and a clarification] of our ideas as to its nature and limitations, and the relation between knowledge and behavior' (Knight 1921, p. 197). He began his investigation of knowledge with the statement: 'The first datum for the study of knowledge and behavior is the fact of consciousness itself. . . . The universal form of conscious behavior thus is action designed to change a future situation inferred from a present one' (Knight 1921, pp. 200–201).

To infer this knowledge of the future, the individual developed an 'imaginative construct' of the world, which combined perception, defined as 'direct communication from nerve terminal organs,' and twofold inference, defined as imaginative data regarding 'what the future situation would have been without our interference' and 'what change will be wrought by our action' (Knight 1921, pp. 201–2). Since 'things not present to sense are operative in directing behavior, that reason, and all consciousness is forward-looking', reasoning is subject to both a 'lack of automatic mechanical accuracy, [a] liability to error' (Knight 1921, p. 203). As a result, to act intelligently, that is 'to adapt [his] conduct to future facts,' an individual assumed the existence of a 'working number of properties or *modes* or *resemblance* between things' in order to make inferences (Knight 1921, p. 206). In situations where outcomes were relatively certain or stable, this tactic was successful. In other cases in which 'a given outcome is not certain, nor even extremely probable, but only contingent . . . conduct in relation to the

situation in question may be ordered intelligently' only if 'a numerical probability of its occurrence is known' (Knight 1921, pp. 212–13).

This insight led Knight into an analysis of probability. He characterized the science of probability 'in the mathematical sense . . . [as] based on the dogmatic assumption that ultimate alternatives are equally probable, which seems to the writer to mean real indeterminateness' (Knight 1921, p. 222). He classified probability according to three types: a priori, statistical and estimates. Humans can calculate determinate a priori probability judgments from an 'absolutely homogeneous classification of instances completely identical except for really indeterminate factors' and were considered on the 'same logical plane as the propositions of mathematics (which also may be viewed, and are viewed by the writer, as "ultimately" inductions from experience)' (Knight 1921, p. 224). Humans can calculate determinate statistical probability judgments from 'an empirical classification of instances' (Knight 1921, p. 224). Thus the first two types of probability encompassed what neoclassical economists had traditionally categorized as risk. In direct contrast, Knight aligned estimates with what he classified as true uncertainty in that they could not 'be reduced to an objective, quantifiably determinate probability' (Knight 1921, p. 231). This limitation was due to the lack of '*a valid basis of any kind*' for classifying instances', a factor characteristic of human data (Knight 1921, p. 231).

Knight's Theory of Entrepreneurship

Knight drew on his notion of uncertainty to explain the development of an enterprise system and its sustaining agents, the entrepreneurs. He argued that the existence of uncertainty became particularly crucial in the organization of economic activity in an industrial society, because individuals had to make many production decisions with outcomes they could not reduce to determinate a priori or statistical probability. Under static conditions, these decisions included both the qualitative and quantitative estimates of productive operations, estimates of future levels of demand, and, most important, the choice of men to make these estimates. Under dynamic conditions, these decisions consisted of estimates of the rate of return on capital investments.

In an enterprise system a division of labor had arisen such that the decisions affected by uncertainty were made by the entrepreneur. His unique role in the economic organization consisted of the 'exercise of judgment involving the *liability to error*' and 'in consequence the

assumption of *responsibility* for the correctness of his opinions' (Knight 1921, p. 276). For performing his duties, the entrepreneur earned two types of income: contractual income for providing management services and profit for making and assuming the responsibility of decisions made under conditions of uncertainty. Profit was a residual income, 'the remainder out of the value realized from the sale of the product after deduction of the values of all factors in production which can be valued, or after all the product has been imputed to productive elements which can be computed by the competitive mechanism' (Knight 1921, p. 308).

While identifying the enterprise system as a result of the condition of uncertainty, Knight did not argue that this mode of organization was 'necessary or inevitable' (Knight 1921, p. 271). Rather what he believed was inevitable in an uncertain world was the fact that social organizations would 'still have to concentrate the function of the actual making of decisions' (Knight 1921, p. 359).

Since he was writing *Risk, Uncertainty and Profit* in part to respond to those reformers who advocated social control of production, Knight investigated the quality of decision-making under conditions of uncertainty in a socialistic system. He highlighted two changes that would occur if society substituted public for private ownership. First, private businesses would become 'public enterprises under the management of hired functionaries' and, second, the public would become the stockholders of corporations (Knight 1921, p. 358). In such a system Knight concluded that the socialist manager would not be as effective as the manager in an enterprise system. First, Knight believed that it was more difficult for society to hold the socialist manager accountable for the decisions that he made due to the increased number of owners: 'The insuperable difficulty of cooperative production has been to make the individual *feel* that the results depend on his own activity. The individual feels lost in the mass, helpless and insignificant' (Knight 1921, p. 359).

Second, without reliance on the market mechanism to determine the amount of profit residual and consequently the success of the decision-makers' estimates in an uncertain world, the socialist system faced 'the essential problem . . . [of] wisely . . . select[ing] such responsible officials and promot[ing] them strictly on the basis of what they accomplish' (Knight 1921, p. 361). In his final argument regarding the lesser efficiency of socialism, Knight contradicted his earlier point about managerial accountability. Socialist managers would not be less careful

when using resources, because society could hold them less accountable. Rather they 'universally show a tendency to "play safe" and become hopelessly conservative. The great danger to be feared from political control of economic life under ordinary conditions is not a reckless dissipation of the social resources so much as the arrest of progress and the vegetation of life' (Knight 1921, p. 361).

Thus because economic activity took place in a world of uncertainty, Knight argued that an economic system organized on the basis of *laissez-faire* was more efficient. If decision-makers knew that they would receive profit income on the basis of realized results, they would have the incentive to assume the risks inherent in the production process in an uncertain world.

KNIGHT'S ETHICAL JUSTIFICATION FOR LAISSEZ-FAIRE

While Knight consistently argued for the superior efficiency of an economic system organized on the basis of *laissez-faire*, his views on the ethical implications of competition altered significantly. During the 1920s he concentrated his attention on the ethics of competition, because he believed 'a clear view of its shortcomings in comparison with conceivable ideals must be of the highest value in making [competition] better than it is' (Knight 1923, p. 45). This early investigation convinced him that no ethical foundation for competition existed: 'we appear to search in vain for any really ethical basis of approval for competition as a basis for an ideal type of human relations, or as a motive to action' (Knight 1923, p. 74). During the 1930s he widened his investigation to consider the ethics of socialism and the ethical ideals of Marxism, Christianity and idealism as alternative value standards for organizing economic activity. His change of focus was motivated both by his concern about the international movements to systems of fascist-nationalism (see Knight 1933b and 1935a) and his distress about the widespread movement among intellectuals to apply the scientific method to problems of social control (see Knight 1932 and 1933b). As a result of these investigations, Knight came to the conclusion that a competitive order organized with *laissez-faire*, even with its flawed ethical foundation, was better than other systems. Significantly, in making his cases against and for *laissez-faire*, once again Knight returned to his notion of uncertainty.¹⁵

Knight's Theory of Ethical Analysis

Before outlining the evolution in Knight's ideas about the ethical foundations of the laissez-faire system, a clear understanding of his approach to ethical analysis is required. First, he conceived of society as individualistic and dynamic: 'The fundamental fact about society as a going concern is that it is made up of individuals who are born and die and give place to others' (Knight 1921, p. 375). Second, he contended that all societies 'must operate in accordance with a *social* standard . . . related in some way to the values of the individuals making up society' (Knight 1923, p. 42). Knight argued against the 'commonly accepted' approach of economists, the use as a social standard of a 'hedonistic' or utilitarian ethics, which assumed 'that human wants are objective and measurable magnitudes and that the satisfaction of such wants is the essence of the criterion of value' (Knight 1923, p. 41). In such a scheme, efficiency became the sole basis on which to judge the ethical character of the economic system. Knight rejected the focus on efficiency because he did not believe that wants were stable. Rather, the economic system created, as well as satisfied, wants. He recommended that a proper ethical judgment of economic activity should concentrate on 'the character of the results or the character of the motive which led the action' (Knight 1923, p. 73). To accomplish that task Knight offered 'a real, nonscientific, transcendental ethics' (Knight 1922, p. 39), an approach that ultimately derived from his concept of philosophy and his pluralistic theory of human nature and conduct.

In Knight's judgment, ethics and economics converged in that both 'divisions of knowledge' dealt with human conduct (Knight 1922, p. 19). Yet while theoretical economics focused on man as a rational problem solver who adapted means to given ends, ethical analysis concentrated on man as a social problem solver who critically deliberated about change and conflicting ends by himself and with others. Further, since ethical ends evolved over time, man could not perform ethical analysis according to the tenets of the scientific method. As such, the social scientist, in comparing ethical ends, had to engage in a non-scientific analysis, a 'criticism of standards' along the lines of aesthetic and literary criticism (Knight 1922, p. 39). Knight acknowledged that in some respects this method of analysis was 'intellectually unsatisfying', because it suggested that no absolute ethical standard existed (Knight 1922, p. 39). Yet, Knight found merit in this ambiguity by virtue of the fact that thinking in terms of provisional ethical standards permitted

individuals, using rules of good judgment to ‘test and try these values, to define and improve them, rather than to “accept” and satisfy them’ (Knight 1922, p. 40).

It seems probable that Knight’s own provisional ethical standard might come into play as a benchmark as he set out to ‘test and try . . . [the] values’ underlying the various modes of economic organization (Knight 1922, p. 40). While he did not provide a concise summary of his ethical position, scattered statements in his writings do provide some insight about Knight’s own views. In essence, Knight’s ethical standard was freedom: ‘the ideal is *freedom*, no [social] control’ (Knight 1924, p. 133). Following from his rejection of hedonistic/utilitarian ethics, his concept of ethical freedom did not deal with the maximum freedom of means. Rather, he meant that an ethical society provided ‘its members with the freedom to ‘realiz[e] . . . individual ends’ (Knight 1940, p. 138).

Knight’s Ethical Comparison of a Laissez-Faire System and Socialism

While Knight evaluated the ethical dimensions of a variety of modes of social organization, his comparison of the ethics of competition and of socialism emerges as key to understanding his evolving attitude toward laissez-faire. First, an ethical comparison of a laissez-faire system with a socialist one followed the pattern he established when contrasting the economic efficiency of these two modes of organization. Second, he classified both systems as individualistic, a fundamental quality of his concept of society, and as ethically committed to freedom, his personal ethical standard: ‘In both systems or philosophies . . . ends or values inhere in the individual rather than in society . . . and in addition, ends are defined in both cases, by the free choices of individuals’ (Knight 1940, p. 138). In its essence, Knight’s comparison of the laissez-faire system with socialism focused on the effect of uncertainty on economic activity. First, the fact of uncertainty influenced the social aspects of production by turning it into a game. Second, the existence of uncertainty focused on leadership and the character of information available to guide social action.

Economic activity as a game

When investigating the social aspects of economic activity, Knight likened it to a game. Knight contended that an important facet of man’s pluralistic human nature was his play attitude or his ‘intrinsic interest in

action' (Knight 1923, p. 61). Thus to insure maximum productive efficiency, a society needed to organize the economic game such that it was interesting.

Knight isolated three elements that determined who won the economic game and thus contributed to its interest. The first element consisted of the ability to play, which was determined by a combination of innate endowments and education. The second constituted the effort exerted to play the economic game. The third element was related to uncertainty; it consisted of luck, because unless the outcome was 'unpredictable . . . there is no game' (Knight 1923, p. 63).

When making an ethical comparison between competition and socialism as games, Knight believed that 'it is absurd to speak of equality as an ideal' in the sense of equality of outcomes (Knight 1923, p. 61). Equality of outcomes simply made no sense if competition was to spur its participants to action. Yet, even though Knight rejected socialism as an ethical standard when considering the social aspects of economic activity, he did not consider a system of *laissez-faire* as superior by default. Rather, Knight changed his focus to equality of opportunity and found the *laissez-faire* system wanting. First, he believed the outcomes of 'competitive games' served as inaccurate tests of real ability 'for the terms on which different individuals enter the contest are too unequal'; further, over time, this inequality increased (Knight 1923, p. 64). Second, he believed the luck element was very large and that it, too, worked cumulatively in favor of the initial lucky winners of the competitive game. Finally, Knight stated that while the individual capacity to play was different, there was 'no classification of the participants or distribution of handicaps such as is always recognized to be necessary to sportsmanship where unevenly matched contestants are to meet' (Knight 1923, pp. 64-5). Because of these factors, Knight concluded that while the competitive game provided great interest for the leaders and increased productivity, this result occurred at the expense of the majority of members of society: 'this tendency to make the game very interesting indeed to a small number of "captains of industry" and "Napoleons of finance," but to secure this result by making the monotonous drudgery of the lives of the masses who do the work' (Knight 1923, p. 61). And Knight found 'a certain ethical repugnance attached to having the livelihood of the masses of people made a pawn in such a sport' (Knight 1923, p. 75). Thus, Knight emphasized inequality of opportunity when he declared that there exists no 'ethical basis for the approval of competition' (Knight 1923, p. 74). Further, the fact of uncertainty permeated his analysis from its presence

making economic activity interesting for the leaders to its incorporation into his explanation of inequality of opportunity.

Leadership and social action

In the 1930s Knight observed that the 'world of what we call European civilization appears to be in a state of transition from [economic individualism] to fascist-nationalism' (Knight 1935a, p. 275). In response to these political movements, Knight came to believe that 'the problem of social action is almost wholly a problem of leadership' (Knight 1935a, p. 349). In consequence, he became increasingly concerned with the factors related to the assumption made by socialists that there could exist 'an all-powerful, wise, and benevolent political authority' (Knight 1940, p. 134), capable of administering the entire economic system. When he brought together these qualities with the fact of uncertainty, Knight concluded that the likelihood of finding such an authority was extremely rare.

In part, Knight attributed the difficulty of finding an all-powerful political authority to the type of knowledge this leader required to organize the economy. Recall that in his interpretation of the neoclassical research method and the theory of knowledge, Knight had stressed the 'emphatic contrast between knowledge as the scientist and the logician of science use the term and the convictions and opinions upon which conduct is based outside . . . laboratory experiments' (Knight 1921, p. 230). In a certain world, the rational individual used scientific knowledge as an instrumental technique to adapt known ends to means; in an uncertain world, where 'all activity is explorative' (Knight 1939, p. 117), the non-rational individual relied on convictions and opinions to select ends intelligently (Knight 1936, pp. 37–9). By assumption, the all-powerful political authority of the socialistic state controlled all economic decisions. Yet this leader could reasonably expect the knowledge provided by economic theory to offer only limited technical advice; as such, the knowledge provided by economic theory simply could not become a sufficient base for prediction necessary to run a centralized economy. In addition, Knight stressed that scientific knowledge was not even 'applicable to social problems', because its use implied 'individual power, over other individuals or society as a whole' (Knight 1936, pp. 37–8).

Knight also questioned the capacity of the political authority to be wise. In advocating a change to the socialist mode of organization, leaders were in effect advocating radical social action. Yet given the fact of

uncertainty, Knight feared the unintended consequences of radical social action: 'Experimentation by society upon itself is both limited and dangerous, especially since what it really involves is mainly the experimentation upon society as a whole as sort of a "guinea-pig" by some political group or official' (Knight 1935a, p. 349). He argued that 'there seems to be a general principle of indirection permeating human conduct; we do otherwise than we intend, and by aiming at one goal reach another, which may be better or worse' (Knight 1935a, p. 353). Thus to Knight, the impossibility of predicting the full consequence of any radical social change could only increase uncertainty and unknowingly prove harmful to select groups within society.

Finally, Knight questioned the socialists' assumption that the political authority would be benevolent, primarily because of factors that led to this leader's assuming power. Note that on this point, Knight changes the weight of the urges composing pluralistic human nature from the game attitude emphasized in the 1920s to the religious attitude, because he believed that 'in the political arena . . . the masses instinctively and unequivocally turn toward strong leadership in a time of crisis and serious tension' (Knight 1935a, p. 350). He assumed that 'it is fairly evident that the individuals conspicuously active in urging extensive social change are not generally competent in their judgment of social facts and values and the consequences of possible measures' (Knight 1935a, p. 327). Further, he did not believe that these individuals evidenced indifference toward the outcome of the change; rather, 'they would be the agents to carry out the changes proposed, and to administer the new system if adopted; and their interest can hardly be unaffected by the realization of this fact' (Knight 1935a, p. 351).

Because the fact of uncertainty made it effectively impossible for political leaders to be all-powerful, wise, and benevolent, a democratic political system emerged as superior. The chance was better that its leaders were individuals who responded to priorities established in intelligent discussions of social action in which more members of society could participate. Social change would take place only gradually on the basis of social consensus. Finally, when existent economic theory was presented in a fashion in which the 'postulates necessary for theorizing, and, hence, the divergences between theoretical conditions and reality' were made explicit (Knight 1933b, p. xi), it could provide a knowledgeable foundation on which to base intelligent, democratic discussion.

Knight did not choose the democratic form of leadership of a *laissez-faire* system over that of socialism without a word of caution. First, he

was concerned that leaders could allow democratic discussion to degenerate into competitive persuasion based on their personal preferences for social action. Further, in response to his observations of the 1932 presidential campaign, Knight was concerned that intelligent discussion could easily degenerate into 'crowd-thinking' with its appeal to the 'simple and romantic' and 'unintelligent conceptions of economy' (Knight 1933b, pp. xxvii and xxx).¹⁶ And when the members of society lost their capacity for intelligent discussion, Knight feared that 'the result is inevitable conflict, and finally chaos or tyranny' (Knight 1933b, p. xxxiv).

CONCLUSION

After an extensive intellectual journey, Knight ultimately opted for a system of laissez-faire. His analysis convinced him that the laissez-faire system possessed characteristics better suited to accommodate the fact of uncertainty and its effect on economic activity. Economic organization required a means to assure efficient use of resources and optimal economic progress; in an uncertain world, the laissez-faire system can better achieve those goals by virtue of its assignment of production decisions to private entrepreneurs who knew that the economic system would hold them accountable for incorrect decisions and reward them for correct ones. Leaders required technical information to guide practical action; in an uncertain world the knowledge provided by economic theory as interpreted by Knight was better suited for the information requirements of a democratic political system. Finally, in an uncertain world, the social organization must guard against making drastic changes that could harm some of its members unawares; a democracy with its reliance on consensus-building to guide practical action would promote gradual and more generally informed social change.

It is important to recognize that Knight never considered an economic system organized on the principle of laissez-faire as ideal. In fact, in his years of study of this issue, he found many defects in the laissez-faire system, from the monotonous jobs that became the fate of many in a large-scale organization to his fear that intelligent discussion would degenerate into simple-minded crowd-thinking or competitive persuasion and eventually to tyranny. Thus, in the end, Knight came down on the side of laissez-faire because, in an uncertain world, it was a more workable alternative for social control of economic activity.

Clearly Knight's case for laissez-faire was permeated with his quest to discover the effect of uncertainty, 'the fundamental problem of thought', on economic activity (Knight 1913b, p. 31). This quest affected his belief that economists could not adapt the scientific method as a basis for prediction and control of economic activity due to the fact of uncertainty. Likewise, it influenced his decisions regarding how to extend the theory of profit and ultimately construct an efficiency-based case for laissez-faire. Finally, it had an effect on his recommendations for consensus-building and gradualism in social action. As such, he left the subsequent pioneers a justification for laissez-faire that was fundamentally grounded in his theory of indeterminate uncertainty.

NOTES

1. Generally these doctrines advance that natural law represents a uniform sequence of events in human activities that are assumed to reside in the state of nature and thus to pre-date civil society. Specific examples include Hobbes's doctrine of sovereignty and Locke's doctrine of no taxation without representation.
2. Utilitarianism advances that individuals and societies must determine the rightness of actions with reference to their consequences. Individualism submits that the state exists to serve the individual rather than vice versa. In *A Fragment of Government* (1776) and *An Introduction to the Principles of Morals and Legislation* (1780), Jeremy Bentham applied these notions to develop a theory of social action based on the principle of utility. In essence, he argued that society could evaluate the rightness of an action by its ability to assure the greatest happiness for the greatest number of individuals. His definition of happiness, pleasure or the absence of pain, incorporated the doctrine of psychological hedonism whereby humans strive to maximize the balance of their pleasure over pain.
3. In *The Origin of Species* (1859), Charles Darwin presented a theory of biological evolution that advanced that species of plants and animals develop through natural selection of the variations that increase the organism's ability to survive. Many intellectuals applied this notion to the study of social development, from Herbert Spencer who argued for the optimality of the system of laissez-faire as an indication of survival of the fittest to T.H. Huxley who argued that state socialism represented the next stage of evolution and J.B. Clark who contended that the law of evolution represented a new phase of natural law (Dorfman 1934, pp. 75–6 and 81).
4. John Dewey, one of the leading proponents of pragmatism, described the pragmatist view of thinking as an activity which took place in response to specific needs; as such he argued that valid conceptions of both philosophy and psychology must incorporate both evolutionary processes and the concomitant influence of the environment. With respect to social action, pragmatists believed that it was impossible to apply the natural science method to the social sciences in order for man to control his environment (see Dewey 1917).
5. See for example Thorstein Veblen (1915).
6. See the volume edited by Morgan and Rutherford (1998) for an extended account of this pluralism.

7. See Mary Furner (1975) for an extended discussion of how American economists associated evenhandedness with objectivity.
8. The interpretation of two Chicago Schools follows a tradition in the literature on its development. See for example, Martin Bronfenbrenner (1962), H.L. Miller (1962), Warren Samuels (1976), Reder (1982 and 1987), and Ross B. Emmett (1998).
9. See Dewey (1990) for a discussion of Knight's activities before he enrolled at Cornell University.
10. Knight met J.M. Clark during his initial academic appointment at the University of Chicago (1917–19). Unlike Knight's teachers, Clark went much further in rejecting the basic propositions of neoclassical economics. Under Clark's direction, Knight revised his dissertation 'A Theory of Business Profits' (Knight 1916) for publication. He later published this version as *Risk, Uncertainty and Profit* (see Dorfman 1959:5 p. 469).
11. Knight's puzzling over these issues pre-dated his formal study of economics. For example, his masters thesis which analyzed the writings of Gerhart Hauptmann, the 1912 Nobel Laureate for Literature, reflected Knight's beginning concern for the effect of the new trends in the natural sciences on social development: 'While awakening to the realization of the importance of scientific knowledge, thinking men have had their confidence shaken in the validity and the adequacy of knowledge they already possess and even in the power of the human mind to reach truth that will be final and adequate to the solution of its problems' (Knight 1913a, pp. 65–6).
12. I thank Ross B. Emmett for informing me about the existence of Knight's essay 'Causality and Substance', on which I have based the interpretation of Knight's philosophical views (Knight 1913b).
13. When developing his concept of philosophy Knight appeared to have been influenced by his reading of Henri Bergson. In his philosophical discussion of the irreducible quality of some types of change he quoted Bergson's distinction between 'real time' and mathematical time (Knight 1913b, p. 46). He also mentioned Bergson in later writings in economics (Knight 1921, 1925, p. 27). John McKinney (1977) presented an extended discussion of Bergson's influence on Knight.
14. In his development of the notion of pluralistic human nature and conduct, Knight appeared to be influenced by his study of the work of William James (see for example Knight 1925, p. 97). McKinney (1977) presents an extended discussion of James's influence on Knight.
15. William S. Kern has also argued that Knight's 'penchant for conservatism' stemmed from a 'comparison and appraisal of alternatives', but he limited the effect of uncertainty to Knight's plea for gradualism in social action (Kern 1987, pp. 639, 640 and 645).
16. In fact, Knight became so appalled by the 1932 presidential campaign, that at one point he declared that he was going to vote for the Communist candidate because Communists believed in 'a real aristocratic or class organization of society' rather than a democratic one which often degenerated into crowd-thinking (Knight 1991).

3. Henry Calvert Simons, author of the blueprint

In the revival of *laissez-faire*, Henry Calvert Simons (1899–1946) emerges as influential in two ways. First, he created ‘A Positive Program for Laissez Faire’, that his student George Stigler later characterized as ‘his lucid blueprint of the good society’ (Stigler 1988, p. 139). Written in 1934, this blueprint offered a set of interrelated policy recommendations designed to reconstruct the devastated American economy in a fashion that would save its organizing principle of classical liberalism. Particular aspects of the blueprint, including the institution of a legislated rule for monetary policy, the recommendation of competitive markets as the superior mode of resource allocation and the importance of free trade, remain central features of Chicago economics. The publication of the ‘Positive Program’ also provided the initial example of the sociological role Simons took on in the revival of *laissez-faire*, that of advocate and organizer. With the ‘Positive Program’, Simons offered supporters of *laissez-faire* as potent a call for action as that possessed by contemporary proponents for social control. As Don Patinkin later described, the ‘Positive Program’ combined ‘the same qualities that made Marxism so appealing to many other people at the time: simplicity together with apparent logical completeness; idealism combined with radicalism’ (Patinkin 1981, p. 4). A decade after publication of the ‘Positive Program’, Simons continued as advocate and organizer with his proposal to set up an ‘Institute of Political Economy’ at the University of Chicago, which ‘would preserve and promote the “traditional-liberal political philosophy” of “Chicago economics”’ (Bowler 1974, p. 82). While his death in 1946 ended discussions at Chicago, he did succeed in attracting Hayek to this idea, an interest that ultimately led Hayek to found the Mont Pelerin Society as a sympathetic forum for individuals interested in the traditional-liberal political philosophy.

Simons stands out as Knight’s first prominent student. Simons came under his influence when he accepted a part-time teaching offer from the University of Iowa where Knight was working. The concerns and the

ideas of the Knight of the 1920s go on to play a prominent role in Simons's work. As in the case of Knight, the pluralistic character of interwar American economics shaped the work of Simons. He, too, was concerned with the problem of the ideal mode of social control. He, too, utilized a variety of methods to conduct analysis. He, too, aimed to combine objectivity with advocacy. But due to a variety of factors – age, family background, education, interests, or temperament – this influence manifested itself in different ways in their professional work. As a result, Simons's leadership role in the founding of the Chicago School took on a different character. Whereas Knight took on the role of 'great philosopher and theoretician . . . Simons was the utopian', the optimistic advocate who believed that by using free discussion, he could save laissez-faire (Stigler 1974, p. 170).

PRE-ANALYTIC FOUNDATIONS OF SIMONS'S CASE FOR LAISSEZ-FAIRE

Simons brought two crucial pre-analytic foundations to his study of economics. Like some of his contemporaries, his analysis was not value free. In his situation, a commitment to the social philosophy of classical liberalism permeates all of his work. Likewise, he understood his professional role as that of evenhanded advocate, in his case with the emphasis on advocacy of classical liberalism to his fellow intellectuals.

Simons was born on 9 October 1899 in a small Midwestern town, Virden, Illinois. He grew up comfortably as a member of the middle class, the son of a moderately successful lawyer and an extremely ambitious homemaker. At the age of 16 he enrolled at the University of Michigan with the aim of becoming a lawyer. By his junior year, the study of economic theory captured his interest. Students enrolled at that time had the provocative experience of gaining knowledge of a variety of ways to do economics, from both the 'forward-looking views' of progressives Henry Carter Adams and Charles Horton Cooley and the orthodox economics of Fred M. Taylor (Dorfman 1959:5, p. 401). As a result, students received a training that 'combined a deep respect for the logic of value theory with a predominant leaning toward broad, dynamic, philosophic, humanitarian ideas' (Dorfman 1959:5, p. 403). It is easy to imagine an individual trained by the progressives Adams and Cooley and the orthodox Taylor attracted to Knight's 1920s views regarding the power and limitations of neoclassical theory and the

strengths and weaknesses of the free enterprise system. And, in fact, Simons later stated that 'Knight was nearly perfect as an influence at the next stage' of his career (Simons 1942, p. 1). Knight encouraged him to take further graduate studies in economics, first at Columbia University with his old teacher Herbert Davenport and then at the University of Chicago. When Knight moved to Chicago in 1927, he arranged for Simons to accompany him there in the capacity of lecturer. In 1928, Simons also made a trip to Germany intended to help him make progress on his dissertation on income taxation and learn German. Though he later published his dissertation as *Personal Income Taxation* (1938), he never finished his PhD.¹ (See Stigler 1974).

Commitment to Classical Liberalism

Unlike James Buchanan, whose conversion story will be related later, Simons appears never to have veered from a commitment to the social philosophy of classical liberalism. In his 1945 political credo, he provided a long list of individuals in whose 'intellectual tradition' he believed he followed: 'that of Adam Smith, Herrmann, Thunen, Mill, Menger, Brentano, Sidgwick, Marshall, Fetter, and Knight, and of Locke, Hume, Bentham, Humboldt, Tocqueville, Burckhardt, Acton, Dicey, Barker, and Hayek' (Simons 1945, p. 1). At the same time, he never made it completely clear why he allied himself with this intellectual tradition, as opposed to another; socialism for example. But it is apparent that from the outset of his study of economics he consistently was attracted to individuals whose research led them to advocate preservation of classical liberalism: with Taylor at Michigan,² with Knight in Iowa and with Frank A. Fetter³ at the University of Chicago in the late 1920s. Thus, it appears that over the course of his career Simons started with a particular social philosophy and then explored theoretical justifications that could support it, rather than the other way around.

Due to the centrality of classical liberalism in his work, it is essential that his understanding of this social philosophy is clear. His political credo, the introduction to the collection of his major essays about economic policy, provides the most comprehensive discussion of his views. He characterized it as a 'display of fragmentary ideas and opinions' about 'practical ethics, a political-economic philosophy, or a clear-cut ideological position'. He described his position as 'severely libertarian or, in the English-Continental sense, liberal' (Simons 1945, p. 1). In his understanding of classical liberalism, both liberty and equality

comprised the most important standards for guiding the conduct of individuals in society. By liberty he meant the 'freedom to associate or disassociate' in a variety of settings, including the economy, the political realm and social discourse (Simons 1945, p. 3). By equality, he meant equality of opportunity to participate in economic, political and social activity.

At the same time, Simons conceived of liberty and equality as merely '“relatively absolute absolute”' standards for guiding conduct (Simons 1945, p. 2). This provisional view of liberty and equality as ethical standards stemmed from his updating of classical liberalism with a view of society as an evolutionary organism. To Simons, a society was not a static collection of rational individuals or a 'mere aggregate of reified aspects'; rather he viewed society as 'a living, functioning organization or “organism”' that changed over time (Simons 1945, p. 2). His understanding of classical liberalism was also teleological in the sense he believed the contemporary social order represented a higher level of social development: 'Liberalism is an optimistic view of man and society. It surveys recent centuries and calls them mainly good, each better than the one before, each achieving greatly and bequeathing enlarged potentialities' (Simons 1945, p. 3). These potentialities included greater freedom for all, the growth of knowledge over superstition and the economic progress that checked population increases (see Simons 1945, pp. 2–3).⁴

Simons coupled his commitment to classical liberalism with the concept of the evolutionary social organism to fashion his vision of the good society. As a classical liberal, the 'aspectual qualities' of his good society consisted of liberty and equality; at the same time, because Simons believed that the social organism evolved, classical liberalism's 'good society is not static conception but essentially social process whose goodness is progress' (Simons 1945, pp. 1–2). Liberty took on the prominent role in social process 'as both a requisite and a measure of progress' (Simons 1945, p. 1). As a requisite of progress in the good society, liberty enabled freedom of association in social discourse, economic activity, and political action. In social discourse, it allowed the organized, free discussions that established moral consensus as the social organism evolved. In the economic realm, on one level, liberty ensured commutative justice, which in turn insured the most efficient production of the largest amount of goods and services. Drawing on the productivity ethics developed earlier by John Bates Clark, Simons stated that commutative justice occurred when individuals enjoyed liberty, or

the freedom to exchange goods and services, in organized markets; the result of this voluntary exchange was that each would be rewarded 'according to the productivity of his property, capital, or capacity (including personal capacity)' (Simons 1945, p. 5). At the same time, Simons argued that economists must go beyond 'naïve' productivity ethics, because commutative justice took for granted 'an existing distribution of capital, among persons, families, communities, regions, and nations,' which often resulted in an inequality of income that hindered freedom of association (Simons 1937, p. 12 and 1945, p. 5). Thus, to insure what he called distributive justice, Simons's vision of the good society also stressed the importance of equality of opportunity to level human 'capacity, capital, and possessed power' prior to production (Simons 1945, p. 6).

The one concentration of power Simons sanctioned in the good society was the 'monopoly of violence' given to the central government. This exception stemmed from his multifaceted view of human nature, which extended the pursuit of self-interest to both individuals and groups and emphasized humanity's 'destructive, fighting propensities' (Simons 1937, p. 3). As a result of these various propensities, in social activity, either a conflict or a harmony of interest could prevail. The possibility for conflict required that the central government control 'constituent political units and all extra-governmental bodies' (Simons 1945, p. 16). He recommended that the central government hold them in check by the requirement to use its monopoly of violence according to predictable rules of law. In turn, the rules of law would hold the government in check, because they would be 'based on overwhelming voluntary consensus of free men and built and rebuilt by gradual experimentation, organized discussion, and tolerant compromise' (Simons 1945, p. 23).

The Task of the Economist

The task that Simons took on as economist brought together the qualities of classical liberalism with the professional ethos of interwar economics. His view of classical liberalism insisted that change in social standards should take place gradually, on the basis of organized, free discussions. Interwar economists comprehended that professionals should serve as evenhanded advocates in public policy debates. Simons's combination of these conditions emphasized problem solving and evenhanded advocacy in organized discussions. The purpose,

language and organization of the 'Positive Program' typify this approach.

Up until the early 1930s, Simons did not actively participate in generally accepted customs of professional discourse – publications in specialized journals and participation in scholarly meetings. In 1933, he drastically changed: preparing book reviews, composing memoranda sent to national policymakers, traveling to Washington DC to help craft bills for banking reform and ultimately writing the 'Positive Program'. What caused this increase in activity? In essence, Simons aimed to fulfill one part of what he considered the task of the economist – to solve an economic problem, in this case, the Great Depression.

To Simons the problem of the Great Depression was twofold. In part, like many of his fellow economists, he was responding to the 'economic chaos' it engendered, and he feared that the 'economic organization is perilously near to disintegration and collapse' (Simons 1934a, pp. 40–41). It is hard today to empathize with the shock and anxiety accompanying the dizzying decline in the American economy at the beginning of the Great Depression – hundreds of failed banks, a 25 per cent rate of unemployment, and a 25 per cent decline in real output. But, if it were possible to comprehend this situation, it would not be difficult to imagine any formerly unremarkable economist stirred to action by the devastating impact of the Great Depression on so many in American society. But Simons was galvanized by more than the economic decline; he was responding to the 'chaos of political thought' he believed fundamental to early New Deal policies (Simons 1934a, p. 77). As Otis Graham has described: 'The "hundred days" were a whirlwind, an impossibly brief period in which to enact, let alone understand, the mass of legislation that was made law. These were days of intellectual confusion for both the administration and onlookers, but the confusion was harder to bear from the outside' (Graham 1967, p. 27). As an onlooker, Simons's growing alarm stemmed from his observations that the advocates of national planning and a managed economy were respected members of Franklin Roosevelt's 'Brains Trust', despite the alarming examples of similar arrangements in other nations, ultimately spelling doom for classical liberalism:

We have witnessed abroad the culmination of movements from constitutional government to dictatorships, from freedom back to authority . . . Yet, faced with same problems, we adopt measures and accept political slogans which call explicitly for an 'American compromise,' that is to say, for more authority and less freedom here and now.

The real enemies of liberty in this country are the naive advocates of managed economy or national planning. (Simons 1934a, p. 14)

The second aspect of the economist's task comprised both the professional responsibility of the evenhanded advocate and the moral responsibility of participant in free, organized discussions. Advocacy entailed drawing on the analysis of current problems to convince somebody of the merits of accompanying policy positions. Evenhandedness restricted advocacy to seeking to influence fellow experts in organized, free discussions, rather than the general public. Morality necessitated advocacy no matter how futile that deliberate conversation might appear.

That Simons took the role of advocate seriously is directly evident in the 'Positive Program'. In his first, widely circulated essay, rather than presenting a carefully reasoned theoretical analysis, he chose to write a 'frankly propagandist tract' aimed at 'old-fashioned liberals, and the more orthodox economists especially, who have responded meagerly to the attack [on traditional liberalism]' (Simons 1934a, p. 40). The substance of the essay consisted of a twofold scholarly investigation: a 'general analysis' of the necessary conditions for a system of classical liberalism and a delineation of the policy proposals designed to move toward those conditions (Simons 1934a, p. 41). He ended the essay with moderating his advocacy by presenting it as means to encourage consensus-building necessary to guide the organized discussion essential to the classical liberal state:

This tract is submitted in the hope of promoting a consensus of opinion within a group which might now perform an invaluable service in intellectual leadership. The precious measure of political and economic freedom which has been won through the centuries may soon be lost irreparably; and it falls properly to economists, as custodians of the great liberal tradition out of which their discipline arose, to point the escape from the chaos of political thought which warns of what impends. (Simons 1934a, pp. 76-7)

That Simons also viewed advocacy of classical liberalism as his moral responsibility is apparent in a letter with religious overtones he wrote to Hayek about the 'Positive Program':

If my proposals seem, as a whole, too drastic, let me explain that both the religion of freedom, and intellectual interests along liberal lines, seem dead here than in England. One must struggle as hard with friends as with enemies; the competent people are mainly, like Frank Knight, ready to abandon all their hope and faith, and to occupy themselves largely with explanations of why the deluge is both imminent and inevitable. (Simons 1934b, p. 2)

SIMONS'S CASE FOR LAISSEZ-FAIRE

Unlike Knight, Simons did not engage in a long exploration that led to a conditional recommendation for laissez-faire as the preferred mode for social control. Rather, due to his pre-analytic commitment to classical liberalism, Simons started his study with a presumption for a policy of laissez-faire. At the same time, this premise did not mean that he accepted the laissez-faire of nineteenth-century liberalism automatically. Rather, as dictated by his conception of a social organism, he reappraised the principle of laissez-faire in light of contemporary conditions:

You may have inferred yesterday that, like some economists at the beginning of the 19th century, I had a very low opinion of the ability of governments to do anything very useful. Frankly, I do sympathize will [sic] the old notion that that [sic] government governs best which governs least. This maxim still contains much truth to be discarded outright. But obviously the democratic state must govern very intensely in some directions, of [sic] only to remain democratic, to preserve internal peace, and to provide the framework of rules without which freedom would be merely chaos, and free enterprise merely brigandage. The scheme of policy for which I plead may be called laissez-faire, for historical reasons; but a modern program of laissez-faire cannot be a do-nothing program by any name. (Simons 1937, p. 1)

To complete this reassessment, Simons undertook a theoretical analysis of contemporary economic conditions. As a result of his re-examination, he recast laissez-faire from the negative state action associated with nineteenth-century liberalism to a positive control of a specific type, in other words, a 'Positive Program for Laissez Faire'. In designing the specific proposals, he returned again to Knight's 1923 game metaphor. But, unlike Knight, Simons drew on this metaphor to point the way for devising possible actions to make the game of competition more moral in the evolving social order, rather than as a means to challenge the ethical base of competition.

THEORETICAL ANALYSIS

As mentioned previously, Simons was stirred to create the 'Positive Program' to solve the problem of the Great Depression. His theoretical analysis of this problem was twofold: 'The depression is essentially a problem (1) of relative inflexibility in prices which largely determine costs and (2) of contraction in the volume and velocity of effective

money' (Simons 1934a, p. 74). Like his contemporaries, Simons used several methods in his analysis. In his case, he brought together the deduction of orthodox economic theory with an evolutionary analysis of economic institutions, following, seemingly uncritically, the conservative, 'middle way' Knight recommended in *Risk, Uncertainty and Profit* (Knight 1921, p. 6). Uncritically, because, unlike Knight, he did not provide an extended discussion of his methodological preferences, other than making clear that he did not favor the empirical dimension of 1920s institutional economics. This combination of methods resulted in the development of more realistic theories of imperfect competition and money, the two problems that Simons identified as causes of the depression.

As a first step, Simons brought together his theory of human nature with an evolutionary analysis of economic institutions. In the early years of classical liberalism, the social order had 'evolved a scheme of things under which our destructive, fighting propensities have been, not merely provided with a harmless outlet but actually canalized and organized along most productive lines. Competition is a kind of private warfare which promotes our mutual and collective enrichment' (Simons 1937, p. 3). In recent years, organized 'economic groups' had dislodged competition, leading the 'economic warfare' to become 'destructive and exploitative like organized fighting generally' (Simons 1937, p. 3).

To explain the development of organized economic groups, Simons drew together orthodox theory and an evolutionary analysis of institutions. In essence, Simons attributed the organization of the US economy between the wars to the development of the institution of an 'enterprise economy' composed of large-scale organizations, or enterprises, that he associated with the 'intricate division of labor' of an advanced industrial society (Simons 1936, p. 164; 1934a, p. 45). He ascribed this concentration to both economic and institutional factors.

Simons cited technological change as the economic source of the concentration of business firms. In the last half of the nineteenth century, small enterprises developed new technologies to reorganize production such that economies of scale lowered costs and increased profits. Initially these large-scale organizations conferred social benefits due to their greater efficiency in the utilization of resources. But Simons observed that by the 1930s these organizations had grown so large that diseconomies of scale had started to occur. To maintain their profitability, smaller production units had merged into larger enterprises to achieve economies of scale in merchandising, advertising, financing,

research and development. As a result, enterprises remained profitable going concerns even though they did not employ efficient production techniques. (Simons 1934a, pp. 59 and 71–2; 1945, p. 35).

Simons described the initial development of trade unions as a response to the new techniques of production as well. Initially, trade unions were socially useful, because they counteracted the power of enterprises in wage and benefit negotiations. But, like enterprises, some trade unions had evolved such that they were no longer conferring social benefits. He believed that by the 1930s the only effectively organized groups were craft unions whose members already possessed the unique skills that enabled them to demand and receive high wages. As a result, trade unions had consolidated economic and political power for skilled workers at the expense of the unskilled (Simons 1934a, p. 49).⁵

Simons's institutional analysis focused on the current interpretation and enforcement of relevant laws as sources of concentration. In relation to enterprises, examples included securities laws, the rule of reason interpretation of the Sherman Act, both the Hoover administration's promotion of trade associations and the Roosevelt administration's National Recovery Act of 1933 (NRA), tariffs and agricultural subsidies and recent regressive tax reforms (Simons 1934a, pp. 34, 42, 45–6, 49 and 53). In relation to trade unions, the prime example was section 7a of the NRA which gave workers the right to join unions and bargain collectively and required industrial codes to set minimum wages and maximum hours.

Deriving from his observations that economic and institutional changes had led to a 'disappearance of competition' and an accompanying inflexibility in prices, Simons analyzed two types of partial monopolies – producer and labor (Simons 1934a, p. 43). He used a cartel model to study the behavior of both groups. He viewed the cartel model as the most typical industrial form in the enterprise economy of 1930s America and aligned it with 'the organization basis for which the National Recovery Act has sought to establish everywhere' (Simons 1934a, p. 47). He based the model of producers on four assumptions: (1) the output and pricing decisions of members of the cartel are interdependent; (2) the cartel can set output limits for existing firms; (3) the cartel cannot control the level of investment made by existing firms or potential entrants; and (4) the cartel cannot prevent newcomers entering the industry (Simons 1934a, p. 47). Deriving from these assumptions, Simons made two predictions. First, because price maintenance allowed existing firms to earn high returns, eventually new firms were attracted

to enter the industry and were assigned an output quota. The cartel reduced the output quota of the other firms and the utilization of plant capacity decreased. As a result, a 'gross wastage of investment' occurred due to an increase in excess capacity because the cartel could control the investment plans of its current and potential members (Simons 1934a, p. 48). Second, in long-run equilibrium, the cartel produced until average cost equaled price as firms entered the industry, but that price exceeded marginal cost, thereby negating the allocative efficiency of perfect competition (Simons 1934a, p. 48).

Simons also analyzed advertising and merchandising in relation to the cartel model. He cited the costs of advertising and merchandising as an additional incentive for a firm to join a trade association or cartel. Firms can increase their profits if they can use advertising to manipulate favorably the demand for their product. But because the actions of firms are interdependent, eventually they counter the success of one firm's advertising by advertising of their own. As a result, 'all of them may end up with about the same volume of business as if none had advertised at all' (Simons 1934a, p. 71). In addition, they had to bribe retailers with high mark-ups to sell their products, and they had to prevent consumers from purchasing from wholesalers. An 'absurd proliferation of small retail establishments' followed (Simons 1934a, p. 71). By joining a cartel, theoretically a firm should be able to lower its advertising costs and eliminate this waste because the members can agree not to use advertising to compete. But Simons argued that once organized, the cartel 'tend[ed] to change the form of advertising rather than necessarily to reduce the total of such outlays; selling activities become competitive among industries instead of merely within industries' (Simons 1934a, p. 72). Due to these results, Simons viewed advertising and merchandising as a source of waste and economic inefficiency from both the firm's and society's perspectives.

Simons analyzed trade unions as cartels as well. Like firms in a cartel, he assumed labor joined trade unions to maintain 'a standard rate of pay through collective bargaining . . . above the competitive level' (Simons 1934a, p. 48). Simons predicted three results of cartels in labor markets. First, the number of workers within the unionized industries declined as firms moved to substitute relatively less expensive capital for more expensive labor. Second, the number of firms within unionized industries declined due to the higher costs of production. Third, if the trade union allowed labor to join freely and rationed the hours worked in response, initially the occupation grew as the increase in wage rates

offset the decline in hours worked. Eventually, free entry and the subsequent rationing of work hours caused the members to be 'no better off than they would have been without any organization at all' (Simons 1934a, p. 48). On the other hand, if the trade union could prevent entry, if a seniority system exists, or 'if the demand for this kind of labor is highly elastic', labor was diverted 'into less important *and less remunerative* occupations' (Simons 1934a, p. 49). Whether entry was free or restricted, the community suffered from higher output prices and an inefficient allocation of labor.

Simons also brought together orthodox theory with an evolutionary analysis of monetary institutions to study the secondary cause of the depression: 'contraction in the volume and velocity of effective money' (Simons 1934a, p. 74). In this instance, he used Irving Fisher's version of the quantity theory. Fisher had added consideration of checkable deposits to his form of the quantity theory:

$$MV + M'V' = PT$$

where M was the quantity of money in circulation, V was the velocity of its circulation, M' was 'the total deposits subject to transfer by check,' V' was the velocity of their circulation, P is the price level and T is the volume of trade (Fisher 1911, p. 48). Fisher maintained that the price level varied directly with the quantity of money, provided that the velocity of circulation and the volume of trade remained unchanged. Given that these conditions held, by controlling the supply of money, the monetary authority could normally stabilize the price level. Yet Fisher acknowledged that this 'tendency' depended on the stability of velocity, the ability of the central government to control the supply of money in circulation and a fully flexible price structure.

In his extension of Fisher's theory, Simons drew on his observations about the prevalence of organized economic groups and assumed that there existed 'limited flexibility in prices and wages' (Simons 1936, p. 165). He then focused his investigation on the other two factors which prevented the tendency postulated by Fisher from holding: changes in velocity, or hoarding and dishoarding, and the central government's ability to control the supply of money.

In Simons's analysis, neither condition held due to the way in which the financial structure had evolved up until the 1930s. In essence, he argued that the financial structure was characterized by a competitive mix of public and private institutions that supplied the 'medium of circulation'

in a fashion that 'alternately expand[ed] rapidly and contract[ed] precipitously the quantity of paper currency in circulation' (Simons 1934a, p. 54). First, existing financial regulations allowed 'an indefinite number of agencies, government and private' to supply money (Simons 1936, p. 174). The principal issuers were commercial banks, because the government had given 'special status . . . to the obligations of banks' through laws that provided for special charter, regulation, supervision, guaranty and bankruptcy protection (Simons 1936, pp. 167 and 333n). They supplied money and money substitutes in the forms of currency, demand deposits, time deposits and treasury certificates. In addition, existing law permitted other institutions to create money substitutes. Examples included the corporation's ability to 'financ[e] via the open book account (book credit) and instalment sales' (Simons 1936, p. 171). Second, existing legal regulations created an elastic medium of circulation, primarily because the fractional reserve system required deposit banks to retain only a portion of their creditors' deposits on hand. As a result, the quantity of excess reserves became the basis for the banks' capacity to create and to destroy money and money substitutes by making and calling in loans (Simons 1934a, p. 54). The elastic nature of money was exacerbated by the customary banking procedures of investing primarily in short-term commercial paper and holding only 'small cushions of owner equities' (Simons 1936, p. 167). These practices encouraged bankers to demand repayment of loans and, consequently, shrink the supply of money and money substitutes 'in the face of the slightest uncertainty' (Simons 1936, p. 167). As a result, bankers possessed both the incentive and the capacity for 'precipitating chaotic liquidation' and a subsequent general deflation by forcing businesses to pay back the short-term loans they obtained for working capital (Simons 1936, p. 328n).

'A Positive Program for Laissez Faire'

In his theoretical analysis, Simons had adapted orthodox, neoclassical models to explain the reasons underlying the organization of economic groups at the time of the Great Depression. Because the nature of the economy had changed, he believed that the character of laissez-faire also had to alter. This new concept of laissez-faire could not remain the negative policy that permitted the smooth functioning of the beneficent invisible hand of competition. Rather, given the concentrated nature of the economy, Simons envisioned modern laissez-faire as a more activist

policy that required the state to plan ‘to sustain freedom’ (Simons 1945, p. 3).⁶ The overall goal of this planning consisted of the creation of

the kind of legal and institutional framework within which competition can function effectively as an agency of [social] control. The policy [of laissez-faire], therefore, should be defined positively, as one under which the state seeks to establish and maintain conditions such that it may avoid the necessity of regulation of ‘the heart of the contract’ – that is to say the necessity of regulating relative prices. (Simons 1934a, p. 42)

Simons then returned to the game metaphor to describe how the modern state should go about planning an effective legal and institutional framework:

The modern state, in the liberal view, may best be regarded as the agency through which the rules of the game are announced and enforced. The essential value and the substantial moral foundation of our civilization is [sic] suggested, I believe, by words like sportsmanship or fair play. Moreover, one makes, I believe, a sound approach to problems of modern government by viewing our whole economic life as a grand sort of game . . .

The essence of this game is free enterprise within a definite and fairly stable framework of legal rules . . . The main function of the state within this scheme of things is to provide the legal framework; to see that people play the game according to the rules, to eliminate, by modification of the rules, such practices as would ruin the game if they were tolerated; and generally, to improve the game itself. (Simons 1937, pp. 2–3)

In the ‘Positive Program’ – his recommended legal framework – Simons developed policies that would diminish the power of organized economic groups, who were ruining the game of competition, and that would replace the ‘crudest makeshift’ arrangements of current currency control to improve the game of competition (Simons 1937, p. 3). Primarily and foremost, Simons recommended that to reduce the power of organized groups the state must abolish private monopoly, either through strong enforcement of antitrust or public ownership of natural monopolies. In this regard, he envisioned that ‘the Federal Trade Commission should become perhaps the most powerful of government agencies’ and considered limiting market share to 5 per cent, believing that any loss in efficiency would be offset by the gain in dispersed power (Simons 1934a, p. 58). Second, Simons counseled establishment of a 100 per cent reserves policy to end the power of private institutions to influence the supply of money and to return currency control to the proper authority, the state. He also recommended a legislated rule for monetary policy to insure that the state would use its monopoly control

of the money supply in an unbiased and predictable manner. Third, he suggested a radical alteration of the federal tax structure to make it more progressive so as to lessen the concentration of income and wealth that gave certain members of society more economic and political power. Fourth, Simons offered that the gradual movement to free trade would diminish the power of protected domestic producers. And finally, he believed that applying revenues earned from taxing advertising to consumer education and the establishment of uniform commodity standards would arm consumers with additional information to offset the power of enterprises that used marketing to manipulate demand. Even though he presented the specific tasks for the state in descending order of importance, he conceived of them as integrated and believed all were essential to create an updated *laissez-faire* for a modern liberal state.

CONCLUSION

Due to his lifelong commitment to classical liberalism, Henry Simons never questioned that *laissez-faire* was the optimal policy for social control. What he did ponder was how to apply *laissez-faire* constructively to save the ravaged depression economy in a way that maximized the liberty and equality essential to classical liberalism. His answer resulted in a recasting of *laissez-faire* into planning to sustain freedom. On the one hand, that change greatly enlarged the scope of state involvement in economic activity; on the other, Simons hoped that his prescription for the establishment of predictable rules of law would curb discretionary use of the newly enlarged state power.

With regard to the revival of *laissez-faire*, it is important to remember that Simons was an early member of ‘the affinity group of Knight’s students and protégés that formed in the middle 1930s’ (Reder 1982, pp. 6–7).⁷ And not surprisingly many of the ideas that Knight investigated in the 1920s and 1930s noticeably made their way to Simons’s work, but with variations. For example, Simons’s recognition of evolving ethical standards echoes the theory of ethical analysis that Knight presented in his 1923 ‘The Ethics of Competition’. But, unlike the Knight of 1923 whose comparison of alternative standards of conduct found the ethics of competition lacking, Simons consistently worked from a position that linked the good society with classical liberalism and *laissez-faire*. In addition, his use of a pluralistic theory of human nature repeated the approach of Knight, but with different areas of emphasis. Simons never

included the drives that Knight added in the 1930s, particularly the religious attitude that explained the crowd-thinking Knight highlighted in his ultimate recommendation for laissez-faire. Simons also reasoned using Knight's game metaphor. But, unlike the Knight of 1923 who used the metaphor to declare competition an immoral game for those who lacked equal opportunity to compete, Simons set out to modify the policy of laissez-faire to make the playing field more level by instituting better rules of the game. Finally, Simons accepted the fact of Knightian uncertainty. But, unlike Knight, who drew on his idea to recommend laissez-faire with reluctance due to leadership constraints, Simons referred to uncertainty as a justification to include predictable rules of monetary policy as an integral part of his 'Positive Program'.

In addition to the connections with Knight, it is important to recognize that Simons's reinterpretation of laissez-faire rested on several crucial ideas. First, his adoption of planning to sustain freedom derived from his conception of society as an evolving social organism. If the social organism changed, then necessarily legislators must revise rules of law to continue receiving the benefits of classical liberalism. Second, the particular policies of the 'Positive Program' were founded on a theoretical analysis of the actual, interwar economy that combined orthodox and institutional elements. Because concentration characterized the interwar economy, Simons modeled markets as imperfectly competitive, and he assumed price rigidities existed in his interpretation of the quantity theory. Likewise, due to his observations of the interwar financial structure, Simons's version of the quantity theory modeled velocity as variable and did not assume that a monetary authority could control the money supply.

Finally, it is important to highlight the character of the leadership role Simons took on in the revival, that of tireless advocate for laissez-faire. His work never exhibited the wide-ranging inquiry characteristic of Knight. Instead, it was permeated with both a certainty and optimism about the potential for laissez-faire that drew the subsequent pioneers to take careful notice of his ideas. In addition, he provided them with a model of an active advocate who extended his professional activities beyond the academy.

NOTES

1. A long-time friend believed that Simons never earned his degree, because he 'did not want to be examined by inferior minds' in oral examinations (Anonymous 1972, p. 9).

2. Of Taylor, Simons said: 'Taylor gave me an ideal introduction to economics – what a tough old drill sergeant gives to neophytes in the army – but little more' (Simons 1942, p. 1). He also must have heard from Taylor during some conversation about the superiority of the existing economic order. Because in the 1918 edition of his popular textbook, Taylor stated in his ethical critique of the price principle as a means to regulate distribution and production, that the existing economic order was superior to socialism (Taylor 1918).
3. Simons appreciated Fetter for giving him an 'example of (to my mind) what a political economist should be . . . The identification, of course, has far more to do with broad economic (political) philosophy and professional ethics than with technical economic theory' (Simons 1942, p. 1). Fetter also approved of the capitalist mode of organization because it contributed to the general welfare by virtue of matching individual gains to their merit.
4. Simons's view of society as an evolutionary organism typified the conception held by many American social scientists during the first part of the twentieth century. Certainly he would have heard this idea from Taylor, his favorite undergraduate teacher, who featured the concept of social organism in his famous principles text (Taylor 1918). Yet, despite a general consensus about the organic nature of society, early twentieth-century social scientists fervently debated about the proper degree of social control over this organism's evolution. Simons followed the approach of those who worked to rethink the place of the classical liberalism tradition in an organic society (see Ross 1991, pp. 115 and 240).
5. Simons appears to assume implicitly the existence of a wage fund that laborers share among themselves based on relative degrees of power. With this assumption, he returns to the positions held by laissez-faire economists during the Gilded Age and the so-called dismal economics of T.R. Malthus and David Ricardo (Fine 1964, chapter 1). Interestingly, he betrays a pessimism that is uncharacteristic of the majority of his work.
6. Maria Balisciano argues that Simons did not advocate economic planning (Balisciano 1998, p. 157n). This interpretation counters her view by arguing that due to his characterization of society as an evolving organism, economic planning to insure the maximum amount of liberty must occur.
7. Reder included in this group two laissez-faire pioneers, Simons and Friedman, and Rose Director Friedman, Aaron Director, George Stigler and Allen Wallis.

4. Friedrich von Hayek and the Austrian influence

The wide-ranging work of Nobel Laureate Friedrich von Hayek (1899–1992) provided a crucial link in the evolution of the American attitude toward laissez-faire, both analytically and sociologically. The Swedish Royal Academy of Science recognized his analytic contributions when it awarded him the Nobel Memorial Prize in Economic Science in 1974 for his ‘profound and original’ work in economic theory. The official announcement noted two theoretical contributions: his work on business-cycle theory and his ‘analysis of the functional efficiency of different economic systems . . . [in terms of] how efficiently all the knowledge and all the information dispersed among individuals and enterprises is utilized’. Each contribution served as theoretical justification for separate cases for laissez-faire, both of which influenced the thinking of the American pioneers. The first case originated in Hayek’s early work extending the Austrian monet-ary theory of the business cycle, an analysis that Lucas cited as a precursor of his own research (Lucas 1977, p. 215). The second case arose out of later research on knowledge and the character of a dynamic equilibrium, an analysis Hayek perceived as an extension of Knight’s earlier work on uncertainty (Hayek 1937, p. 34). This research served as the theoretical underpinning of the second case for laissez-faire that Hayek presented in the best-selling tract *The Road to Serfdom* (1944). The Austrian method Hayek drew on in making both cases became an integral component of Buchanan’s theory of public choice.

Hayek also carried on an important sociological role after Simons’s death. The two had begun a correspondence in 1934, when Simons had sent Hayek a copy of the ‘Positive Program.’ Hayek responded with ‘the greatest sympathy for the general spirit which it expresses’ and criticism of some of its particular proposals (Hayek 1934, p. 1). In turn, Simons was greatly encouraged that he had found a fellow believer in the possibility of intelligent discussion: ‘You thus have the rare (I think also scarce) distinction of having both read it understandingly and recorded

faithfully for my assistance your critical reactions. If others of us [economists] were occasionally so scrupulous, and interested in substituting discussion for debate, economics might amount to something' (Simons 1934b, p. 3).

When the two met in 1945, these favorable feelings quickly encouraged their conversations about the design of an organization that could serve as an international round-table for those individuals interested in discussing alternative means to promote a return to classical liberalism and its concomitant policy of *laissez-faire*. In 1947 Hayek founded such an organization, named the Mont Pelerin Society after the site of the initial meeting, and he went on to serve as its president for the next twelve years. Ultimately it played a crucial role in providing a supportive forum for *laissez-faire* economists, including the pioneers.¹ Knight and his student Friedman were among the thirty-six participants at the inaugural meeting (Stigler 1988, pp. 143–7). Friedman went on to serve as the society's president from 1970 to 1972, and Buchanan served as president from 1984 to 1986.

Though important to note at this point in the story of the evolution of the American attitude toward *laissez-faire*, the particular influence of the Mont Pelerin Society on the thinking of the pioneers will be discussed at relevant points in the narrative. This chapter will focus on the theoretical work Hayek accomplished to support his advocacy for *laissez-faire*.

PRE-ANALYTIC FOUNDATIONS

After serving as an artillery officer during World War I, Hayek began his academic studies at the University of Vienna. The 'great disturbances of the war' had moved his interest from the physical to the social sciences, and he came to the university trying to decide between psychology and economics (Hayek 1994, p. 44). Because no one was available at that time to train him in psychology, he turned to law and political economy. Eventually, he earned two academic degrees: in 1921 a doctor of law degree and in 1923 a doctoral degree in *Statswissenschaft*, a hybrid field, which encompassed both political science and economics (Blaug 1985, pp. 87–8).

During these years Austria was in the midst of both a political and intellectual ferment. At the end of World War I the Hapsburg Empire had dissolved, and Austrians had established a new republic. The first

government of the republic was formed from a coalition of liberal socialists from Vienna and conservative Christian socialists from the rural and alpine districts. The new government faced immense challenges including near-famine conditions, declining industrial and agricultural production and increasing radicalization of workers' councils. In order to defuse these tensions the coalition government led by socialist Otto Bauer embarked on a program of radical reforms including unemployment compensation, regulation of labor conditions and the establishment of cooperatives, policies perceived as allowing the new republic gradually to become more socialist without the necessity of a Russian-type revolution. Due to these reforms, throughout Austria the workers' councils, which had been an integral component of the socialist coalition, became less rebellious. As a result, the base of socialist national power disintegrated, and socialists had to restrict their reforms to Vienna where they still maintained a political stronghold. With the example of municipal socialism in Vienna they intended to demonstrate the possibility of a third way to achieve a socialist society: a gradual ascent to power through democratic elections without recourse to violence or dictatorships (see Rabinbach 1983, pp. 18–31).

Not surprisingly given this climate of social and political experimentation, Vienna of the 1920s was a stimulating place for a young student such as Hayek. Students were avidly discussing Marxism and psychoanalysis in the coffee shops. Members of the Vienna Circle under the influence of Ernst Mach were developing the philosophy of logical positivism, which combined empiricism and logical analysis to counter the metaphysics of German speculative philosophy and post-Kantian idealism (Caldwell 1982, p. 13). Not all members of this group were sympathetic to the political program of the socialists, but one prominent participant, Otto Neurath, served as a 'tenuous link' between the intellectuals and the politicians (Bottomore 1978, pp. 4–5). In 1919 Neurath published a monograph in which he attempted to demonstrate that the war experience illustrated that central planning authorities could accomplish the distribution of commodities '*in natura*, i.e. that the calculation need not be carried out in terms of some common unit of value but that they could be made in kind' (Hayek 1935a, p. 141). In 1921 Ludwig von Mises, an economist from the Austrian school, countered Neurath's argument with his idea that economic calculation in a technologically complex, socialistic society was impossible (See Mises 1912 and 1922).

Both the logical positivists and the Austrian economists influenced Hayek's intellectual development. He stated that his 'first technical

training . . . in philosophy and the scientific method was entirely in the school of Ernest Mach and later of the logical positivists' (Hayek 1937, p. 58). He also studied with the Austrian economists. Friedrich von Weiser introduced him to the subjective theory of value as a student at the University of Vienna (Hayek 1984, p. 1). During the 1920s he participated in the *Privateseminar* organized by Mises. In 1927 he and Mises created the Austrian Institute of Business Cycle Research, and Hayek served as its first director.

Hayek left Austria in the 1930s for a series of academic appointments in Europe and the United States. In 1931 he moved to the London School of Economics where Lionel Robbins was instrumental in his appointment as the Tooke Professor of Economics and Statistics. During the London years, Hayek was a leading and vocal figure in debates about capital and trade cycle theory with such luminaries as Pierro Sraffa, Keynes and Knight.

In the 1940s, his opportunities to exchange ideas with the other *laissez-faire* pioneers increased greatly. When Hayek had difficulty finding a US publisher, Knight and Aaron Director, Simons's friend and Friedman's brother-in-law, were instrumental in persuading the University of Chicago Press to print *The Road to Serfdom* (Hartwell 1995, p. 123). In 1945, Hayek came to the United States on a lecture tour during which he spent two months at the University of Chicago and became a 'great friend' with Simons (Hayek 1994, p. 127). After a lecture in Detroit, a gentleman in the audience approached Hayek about funding the publication of a US version of *The Road to Serfdom*, and he and Simons immediately began conversations about completing this project (Hayek 1994, p. 127). At this time, they also began discussions about forming an Institute of Political Economy at the University of Chicago that would preserve and promote classical liberalism.

While *The Road to Serfdom* received much popular acclaim, especially after *Reader's Digest* condensed it for American readers, many of Hayek's fellow economists both in England and the United States disparaged it as a work of popular literature. This professional belittlement, coupled with a difficult divorce, prompted Hayek to accept John Nef's invitation to join the Committee for Social Thought at the University of Chicago as a professor of social and moral sciences in 1950, a graduate program in interdisciplinary studies that Knight was instrumental in founding. He welcomed the opportunity to move his research into broader discussions of social philosophy and to refocus his teaching to interdisciplinary subjects after 20 years of teaching pure

economic theory (see Hayek 1994, pp. 125–6). During the twelve years he spent at Chicago, Hayek had ample opportunity to interact with the laissez-faire pioneers, in particular Knight and Friedman who regularly attended his lectures (Leube 1984, p. xxiv). In 1961, with support of the William Volker Fund, Buchanan brought him to the University of Virginia as a Distinguished Visiting Scholar in the newly founded Thomas Jefferson Center for Studies in Political Economy, which had brought together the group of scholars, which developed public choice theory. Hayek retired from Chicago in 1962 and returned to Europe to work alternately at the Universities of Freiburg and Salzburg for the remainder of his life.

Hayek is commonly identified as an Austrian economist. Austrian economics originated in the work of Menger, and Wieser and Mises developed it further.² In their analytic work these economists shared with neoclassical economists a focus on the problem of securing an efficient allocation of resources, starting analysis with the postulate of individual rationality. But in distinction from neoclassical economics, the Austrians investigated the valuation process in terms of marginal balancing of opportunities foregone, employing the methods of subjectivism and methodological individualism to accomplish that analysis.

In his development of the theory of value, Menger laid the groundwork for the Austrian method of subjectivism and methodological individualism. He had argued that value was ‘not inherent in goods, no property of them, nor an independent thing existing by itself. It is a judgment economizing men make about the importance of goods at their disposal for the maintenance of their lives and well-being. Hence value does not exist outside the consciousness of men’ (Menger 1871, pp. 120–21). Consequently the only action relevant to economic analysis consisted of the ‘premeditative activity of humans aimed at the indirect or direct satisfaction of their material needs’ (Menger 1871, p. 193).

To Menger the recognition of the subjective valuation process had several implications that went on to influence Hayek. First, it inherently confined analysis to the atomistic foundation of the premeditative activity of individuals. This approach resulted in a theoretical method that precluded analysis originating in aggregates and that emphasized a one-way causality starting from individual action, rather than the mutual determination emphasized by Marshall and his followers. Second, as humans aimed to satisfy their economic needs, exchange institutions arose spontaneously as a result of their premeditative actions, such as the institutions of private property and money.

Hayek's judgment that the Austrian method was a fruitful one for analysis influenced his research from the outset of his career. For example, in his initial work on business-cycle theory he criticized those economists who had taken the wrong-headed approach of basing their analysis on aggregate magnitudes rather than individual opinions and intentions:

none of these magnitudes [that is, total quantity of money, general level of output, total volume of production] *as such* ever exert an influence on the decisions of individuals; yet it is on the assumption of the knowledge of the decisions of individuals that the main propositions of non-monetary economic theory are based. It is to this 'individualistic' method we owe whatever understanding of economic phenomena we possess. (Hayek 1931, p. 4)

By the 1950s Hayek stated that 'it is probably no exaggeration to say that every important advance in economic theory during the last hundred years was a further step in the consistent application of subjectivism' (Hayek 1951, p. 35).

Though Hayek always used Austrian economics in his theoretical work, it was not until the early 1940s that he began systematically to write down his conception of the Austrian method. He later collected that work in the 1951 volume *The Counter-Revolution of Science: Studies on the Abuse of Reason*. Like Menger, Hayek categorized economics as a discipline that 'deals with the results of conscious human action' (Hayek 1951, p. 57). In interpreting action as purposive, the 'facts' of the analysis became 'the opinions or intentions of acting persons' (Hayek 1943, pp. 60 and 62). The analyst was able to perceive these 'opinions or intentions' because he shared with his subjects a common mental structure, in other words a 'common principle on which they classify external events' (Hayek 1951, p. 57). This common structure was composed of the 'various attitudes of individuals toward each other (or their similar or different attitudes toward physical objects)' (Hayek 1951, p. 59). Working from this common structure, the analyst was able to impute knowledge of intentions to the observed individuals 'by interpret[ing] their action in the analogy of [his] own mind: that is . . . he group[ed] into classes or categories which [he] kn[ew], solely on the knowledge of [his] own mind' (Hayek 1943, p. 63). The analyst then reasoned deductively from the classificatory scheme of 'opinions and intentions' he had imputed to observed individuals 'to find regularities in the complex phenomena which direct observations cannot establish' (Hayek 1935a, p. 126). From these regularities 'he gradually constructs

... a mental model which aims at reproducing the working of the economic system as a whole' (Hayek 1933, p. 128).

Hayek acknowledged that on occasion individuals developed 'popular generalizations' about society and the economic system that were not the real cause of their actions (Hayek 1951, p. 62). As a result the analyst had to 'regard as no more than provisional' the theories that individuals devised to explain social institutions; rather he needed to 'systematically start from the concepts which guide individuals in their actions and not from the results of their theorizing about actions' (Hayek 1951, p. 54). Hayek termed the concepts that actually guided action as 'the motivating or constitutive opinions,' which were 'essential for the existence of phenomenon which people refer to as "society" or the "economic system" but which will exist irrespectively of the concepts which the people have formed about these wholes' (Hayek 1951, p. 64). The discovery of the 'constitutive opinion' was the central feature of methodological individualism.

Hayek believed that theories constructed on the basis of subjectivism and methodological individualism 'provide a technique of reason which assists us in connecting individual facts, but which, like logic or mathematics, is not about the facts' (Hayek 1943, p. 72). Thus practitioners of Austrian economics could not construct theories they could 'verif[y] or falsif[y] by reference to the facts'; rather they could test theories only on the basis of logical consistency (Hayek 1943, p. 72).

Hayek also cited Menger's 'conception of the spontaneous generation of institutions' as presented in his *Principles of Economics* (1871) as a 'decisive influence' on his own economics (Hayek 1994, p. 57). His application of this concept appears in his work by the early 1930s, and he attributed his use of it to the greater awareness of 'the mutual interdependence of the particular phenomena' he had acquired by applying the Austrian method to the analysis of economic activity (Hayek 1933, p. 129). In essence, analysis founded on the Austrian method revealed

that an immensely, complicated mechanism existed, worked and solved problems, frequently by means which proved to be the only possible means by which the result could be accomplished, but which could not possibly be the result of deliberate regulation because nobody understood them . . . [That is] we discover again and again that the necessary functions are discharged by spontaneous institutions. (Hayek 1933, p. 129)

Hayek added later that the discovery of 'spontaneous institutions' demonstrated 'that many institutions on which human achievements rest

and have arisen are functioning without a designing and directing mind . . . and that the spontaneous collaboration of free men creates things which are greater than their individual minds can ever fully comprehend' (Hayek 1946, p. 7).³

HAYEK'S FIRST CASE FOR LAISSEZ-FAIRE

Hayek initially used the Austrian method to consider the theory of the business cycle.⁴ This project made Hayek into a principal figure in the interwar debates about business cycle theory. In fact, Sir John Hicks, co-developer of the Keynesian-inspired ISLM analysis noted in the 1960s:

When the definitive history of economic analysis during the nineteen-thirties comes to be written, a leading character in the drama (and it was quite a drama) will be Professor Hayek . . . it is hardly remembered that there once was a time when the new theories of Hayek were the principal rival of the new theories of Keynes. (Hicks 1967, p. 203)

This project also initiated a spirited intellectual conversation between Hayek and Knight about the proper conception of capital in business cycle theory.

Hayek started this line of research after spending the 1923–24 academic year in the United States. He came officially affiliated with New York University, but during this time he also attended lectures by Wesley C. Mitchell and J.B. Clark at Columbia University (Hayek 1994, p. 66). During his stay he found 'most interesting and instructive' the research undertaken by American economists about both monetary policy and the control of business cycles and experiments in banking policy initiated by the Federal Reserve (Hayek 1984, p. 2). Upon his return to Vienna in 1924, Hayek began research for 'a major work' to extend the Austrian monetary theory of the business cycle (Hayek 1984, p. 2).

Hayek reported his extension of the theory of the business cycle in two complementary monographs. He began his analysis with the '*monetary* factors which *start* cyclical fluctuations' in *Monetary Theory and the Trade Cycle* first published in German in 1929 and later in English in 1933 (Hayek 1929, p. 17). In *Prices and Production*, he 'concentrated on the *successive changes in the real structure of production* which *constitute* those fluctuations' (Hayek 1929, p. 17). As a first step in his new research project, Hayek critiqued existing theories from the perspective of Austrian economics. He rejected Mitchell's statistical

analysis of the business cycle, because the Austrian method entailed that the development of inductions about empirical regularities was irrelevant to the deduction of economic laws from the purposive actions of individuals. He also rejected what he called 'disproportionality' theories of the business cycle, because they inconsistently used disequilibrium between supply and demand in specific markets in a static general equilibrium framework to explain the business cycle. Hayek believed that quantity theorists such as Fisher and R.G. Hawtrey had moved in the right direction to address this inconsistency with their focus on monetary explanations of the business cycle. Unfortunately, they had failed to recognize the Austrian insight that the theorist could not 'establish causal relationships between aggregates or general averages' (Hayek 1931, p. 4).⁵ Thus, after studying current business cycle theory, Hayek decided to build on the work of Mises presented in *The Theory of Money and Credit* (1912). He set out to investigate how, under a stable general price level, relative prices may change due to monetary influences on the opinions of purposive individuals; that is, 'how and when money influences the relative values of goods and under what conditions it leaves these values undisturbed or . . . when money remains *neutral* relative to goods' (Hayek 1931, p. 31).

Hayek originated his theory of the business cycle in the hypothesis that money influenced relative prices when the economy moved from one position of general equilibrium to another, that is when 'the given situation cannot continue' and, therefore, the opinions of purposive individuals change (Hayek 1929, p. 45). To test this hypothesis he put together a borrowed set of theoretical tools. To study changes in equilibrium, he used the theory of capital developed by Eugen von Böhm-Bawerk. This theory attributed variations in output to transitions to more or less roundabout methods of production, which in turn changed relative prices between consumer and producer goods. To study the influence of money on relative prices, he used Knut Wicksell's notion of cumulative process, as reinterpreted by Mises. Wicksell had pointed out the distinction between the natural rate of interest and the money rate of interest. He contended that in a credit economy in which the banks could create money, a divergence between these two rates could lead to a cumulative process of inflation and deflation (see Backhouse 1985, pp. 151–4 and 172–3.)

Hayek explored monetary effects on relative prices during the transition to a new equilibrium by positing a situation in which banks supplied additional credit to producers while consumption and saving plans of

households remained unchanged. So that banks could encourage borrowers to decide to invest, they lowered the money rate relative to the natural rate of interest. The decrease in the money rate of interest immediately lowered costs for those producers that used more capital in production. Those producers decided to use the original means of production, or specific capital, and added non-specific capital as they could to take advantage of the lowered cost of capital. As a result, the entire process of production lengthened or became more roundabout. Ultimately, the resulting increase in capital investment caused the price of capital goods to increase relative to the price of consumer goods. Initially producers responded by producing more capital goods and less consumer goods, leading to an involuntary reduction in consumption. Eventually, the lower relative price of consumer goods led producers to decrease their demand for higher-priced capital goods. At that point, a new transition back to a shorter production process would begin. Producers transferred non-specific capital from the production of capital to consumer goods, short-circuiting the earlier lengthening of production and creating excess capacity in the form of specific capital (see Hayek 1931, pp. 69–92).

Based on this analysis, Hayek contended that the downturn in the business cycle occurred due to the changed opinions of producers that led them to make decisions that misdirected production. Returning to his assumption about the opinions of households on saving, he concluded that the changes in the structure of production resulting from the divergence between the money and natural rates of interest had different results, depending on whether they

correspond to real changes in the decisions of individuals as to spending or saving, or whether [they are] brought about artificially, without any corresponding changes in individual saving activity . . .

When changes in the division of the social dividend, in favour of capital creation result from changes in the saving activity of individuals, they are self-perpetuating. This is not true of such variations . . . as are due to additional credits granted to entrepreneurs; these can be assumed to persist only so long as the proportion is kept artificially high by progressively increasing rate of credit creation. (Hayek 1929, pp. 214–15)

Hayek suggested that his analysis of the business cycle demonstrated that central bankers possessed the potential to check an expansion by intervening in two ways. First, since institutional arrangements in the 1930s permitted banks to create credit, the central bank not only had to

refrain from expanding credit during an expansion, but also 'to compensate for the change in proportion between the base furnished by the credit and the superstructure erected upon it [by] *contract[ing]* credit proportionally' (Hayek 1931, p. 117). Second, since Hayek, like Simons, did not believe that the velocity of circulation was stable, a successful contraction of credit required the central bank to make 'changes in the volume of money if money is to remain neutral towards the price system and the structure of production' (Hayek 1931, p. 121).

Hayek did not believe that these policy responses were politically or technically feasible. First, he deemed it politically impossible for a central bank to contract credit during an expansion. Second, he judged it technically impossible for a central bank to manage the money supply, because an unstable velocity of circulation in money made 'the possibility of ever actually fixing its magnitude questionable' (Hayek 1931, p. 113). Given these complications, Hayek concluded: 'It is probably an illusion to suppose that we shall ever be able entirely to eliminate industrial fluctuations by means of monetary policy' (Hayek 1931, p. 125).

Instead Hayek believed that the only 'practical maxim for monetary policy' implied in his analysis of the business cycle was 'the negative one that the simple fact of an increase of production and trade forms no justification for an expansion of credit' (Hayek 1931, p. 125). In the place of interventionist policy, he recommended that:

The only way permanently to 'mobilize' all available resources is, therefore, not to use artificial stimulants . . . but to leave it to time to effect a permanent cure by the slow process of adapting the structure of production to the means available for capital purposes.

And so, at the end of our analysis, we arrive at results which only confirm the old truth that we may perhaps prevent a crisis by checking the expansion in time, but that we can do nothing to get out of it before its natural end, once it has come. (Hayek 1931, p. 99)

With two major books published on this topic by 1931, Hayek completed the bulk of his work on extending the Austrian theory of the business cycle before economies around the world suffered the devastating effects of the depression. Thus, in its essence, Hayek's first case for laissez-faire arose out of theoretical developments. He determined to extend the Austrian theory of the business cycle, using two borrowed tools: the theory of capital developed by Böhm-Bawerk and Wicksell's cumulative process as adapted by Mises. He added his novel concept of monetary neutrality to explain the business cycle as the result of subjective decisions made by individual producers, which

resulted in misdirected production. This extension provided a more complete formalization of Austrian economics in the area of business cycle research. In his theory of the business cycle, waiting for changes in the subjective decisions of consumers about saving and entrepreneurs about production represented the most effective way to alter the structure of production. And it was in fear of distorting subjective decision-making that Hayek recommended that monetary policymakers not use discretion.

The theoretical research underlying Hayek's first case for *laissez-faire* provoked much controversy during the early part of the 1930s. The scholarly journals of this era are filled with discussions about Hayek's work on the business cycle, including comments by Keynes, Sraffa and Knight. Knight did accept Hayek's hypothesis that the business cycle originated in fluctuations in credit. On the other hand, he repeatedly attacked the Austrian time-period theory of capital and interest.

In essence, Knight did not accept the implications of the Austrian method that the decision to invest in capital was determined by the subjective preferences of individuals with respect to present and future consumption (Knight 1941, pp. 417 and 425). Instead he argued that for a correct view of the theory of investment, it is necessary to consider the economy as a whole' (Knight 1941, p. 417). Following in the tradition of Marshall and J.B. Clark, Knight contended that all agents of production represented some form of capital. Consequently, just as labor maintained capital 'labour is also produced as well as "maintained" by capital' (Knight 1935b, p. 82). Thus, no cycle of production existed; instead, ' "capital" is an integrated organic conception' tying together human and non-human agents in the process of producing consumption goods and an additional return for future investment (Knight 1935b, p. 83).

To Knight the policy implications for this view of capital theory were clear. He rejected Hayek's assertion that it was impossible for a central bank to stabilize the general value of money (Knight 1941, p. 410). Since producers made investment decisions in response to the underlying structural conditions of the economy, 'conservative theory, correctly interpreted calls for radical measures' along the lines recommended by Simons (Knight 1941, p. 410). In conjunction with his rejection of the subjectivist foundation of the Austrian theory of capital, Knight laid the groundwork for a conservative monetary macro-theory that was framed in terms of aggregates.

Hayek never accepted Knight's criticism. He believed that the 'misplaced emphasis which some authors particularly Professors J.B.

Clark, J. Schumpeter and F.H. Knight, have put on the tautological statement that so long as stationary conditions prevail capital is *ex definitione* permanent, has further contributed to obscure the problem' that 'the capital equipment of society . . . is not a magnitude which, once it is brought into existence, will necessarily last forever independently of human decisions' (Hayek 1931, p. 48n). At the same time the issues that Knight raised stimulated Hayek to explore further the character of a dynamic or intertemporal equilibrium, research that went on to influence his second case for laissez-faire (Hayek 1937, p. 34).

HAYEK'S SECOND CASE FOR LAISSEZ-FAIRE

In the mid-1930s Hayek widened his research interests beyond the pure theory of the business cycle to the consideration of political–philosophical questions, in particular the role knowledge played in economic and social activity. Two sources provided a stimulus for this broadening of focus. First, as Hayek reflected on Knight's critique about capital theory, it became evident that the intertemporal nature of investment decisions pushed consideration about the assumption of perfect knowledge to the forefront. Second, while editing a volume on collectivist economic planning in 1935, he found that during the process of writing an introduction and conclusion 'to explain th[e] development' of the ideas of Mises and Enrico Barone to English-speaking audiences, he was pushed to think about both political philosophy and 'methodological misconceptions in economics', in particular those related to assumptions about knowledge (Hayek 1994, p. 79). Those investigations led him to question 'naive conceptions of "After all, what the market does we can do better intellectually" ' (Hayek 1994, p. 80). His first answer appeared in what he characterized as the 'decisive event' of the 1937 essay on 'Economics and Knowledge'. In working on that paper, he gained an initial understanding of:

the market as a system of the utilization of knowledge, which nobody can possess as a whole, which only through the market situation leads people to aim at the needs of people whom they do not know, make use of the facilities for which they have no direct information: all of this condensed in abstract signals, and that our whole modern wealth and production could arise only thanks to this mechanism – is, I believe, the basis not only of my economic but also much of my political views. (Hayek 1994, p. 80)

His thinking about knowledge ultimately became the foundation for Hayek's second case for laissez-faire, the one he most famously presented in *The Road to Serfdom*. In completing it, Hayek again drew heavily on the Austrian method, much as he had in his earlier extension of business cycle theory.

'Economics and Knowledge'

Hayek began his investigation of economics and knowledge with an exploration of the concept of equilibrium. Following the tenets of the Austrian method, Hayek stated that formal equilibrium analysis '*has* a clear meaning if applied to the actions of a single individual . . . [and] what is relevant is not whether a person as such is or is not in equilibrium but which of his actions stand in equilibrium relationships to each other' (Hayek 1937, pp. 35–6). But when the analyst changed his focus to the consideration of social phenomena, equilibrium analysis 'passes into a different sphere and silently introduces a new element of altogether different character' (Hayek 1937, p. 35). This distinction between an individual and a social equilibrium rested on the often-neglected difference between objective data, 'in the sense of objective real facts,' and subjective data, 'as things known to persons' (Hayek 1937, p. 38). It was incorrect to assume, as economists often did, that these data correspond identically; rather it was necessary to recognize that in describing a social equilibrium 'one person's actions are another person's data' and that the data on which different individuals based their plans were adjusted to the ever-changing objective facts of the external environment (Hayek 1937, pp. 38–9). Thus, in effect, a social equilibrium was achieved due to the coincidence of expectations about these data-of a number of individuals. Further, a social equilibrium was dynamic, because 'the continuance of a state of equilibrium in this sense is then not dependent on the objective data being constant in an absolute sense and is not confined to a stationary process' (Hayek 1937, p. 41).

Hayek believed that in order to analyze a dynamic social equilibrium, economists needed to change their focus from enumerating the conditions of the 'admittedly fictitious state of equilibrium' to describing the process underlying 'the supposed existence of a tendency toward equilibrium' (Hayek 1937, p. 44). In this transformation,

the real content of the assertion that a tendency toward equilibrium exists . . . [became] that, under certain conditions, the knowledge and intentions of the

different members of society are supposed to come more and more in agreement or, to put the same thing in less general and less exact but more concrete terms, the expectations of the people and particularly of the entrepreneurs will become more and more correct. (Hayek 1937, p. 45)

The process by which the knowledge and intentions of different people came into agreement arose out of the fact that 'people do learn from experience' (Hayek 1937, p. 45).

Hayek contended that the appropriate method to study the nature of this learning process began with the development of subsidiary hypotheses, which explained the manner by which individuals could acquire the necessary knowledge to assure a tendency toward equilibrium. In choosing among these hypotheses, Hayek specified that they 'must not only be regarded as possible . . . but it must be regarded as likely to be true; and it must be possible, at least in principle, to demonstrate that it is true in particular cases' (Hayek 1937, p. 46).

In reviewing the subsidiary hypotheses of learning that economists traditionally had used to describe the tendency toward equilibrium, Hayek found two general types. One version assumed perfect knowledge on the part of all members of the economic system to assure determinacy. Hayek rejected this assumption for two reasons. First, in practice, 'correct foresight is then not . . . a precondition which must exist that equilibrium may be arrived at. It is rather a defining characteristic of the state of equilibrium' (Hayek 1937, p. 42). Second, the hypothesis was not conceivably possible, because it required that people be omniscient (Hayek 1937, p. 46). Thus, what economists

pretend to solve is how the spontaneous interaction of a number of people, each possessing only bits of knowledge, brings about a state of affairs in prices corresponding to costs, etc., and which could be brought about by deliberate direction only by somebody who possessed the combined knowledge of all these individuals . . . But in our analyses, instead of showing what bits of information the different persons must possess in order to bring about that result, we fall in effect back on the assumption that everybody knows everything and so evade any real solution of the problem. (Hayek 1937, p. 51)

The second type assumed a constancy of data. Hayek rejected this approach because it mired analysis in the old confusion between the subjective data of 'things known to persons' and the objective data of 'real facts' (Hayek 1937, p. 38).

The assumption Hayek offered to replace the earlier ones of perfect

knowledge and constancy of data was one he adapted from thinking about Menger's problem of 'accounting for the rise of institutions without intention' (Hayek 1994, p. 153). His adaptation was the spontaneous institution of the division of knowledge. Essentially when using this assumption, the analyst presumed that knowledge was divided among participants in the economic system. This assumption made the division of knowledge analogous to the division of labor, in the sense that both assumptions suggested a coordinated use of resources in the economic system, given divided knowledge and skills. Hayek believed that the division of knowledge was an appropriate assumption because experience showed that 'the spontaneous interaction of a number of people, each possessing only bits of knowledge, brings about a state of affairs in which prices correspond to costs, etc.' (Hayek 1937, p. 51).

To apply the hypothesis of the division of knowledge to the consideration of a dynamic social equilibrium, Hayek stated that it was necessary to determine what sort of knowledge was required to assume the tendency toward equilibrium. Traditionally economists had focused on the knowledge of prices, and, more recently, had assumed that prices could be taken for granted such that the only knowledge necessary for a social equilibrium was perfect anticipation of future prices (Hayek 1937, p. 52). But harkening to one of the key points of Mises's socialist calculation argument, Hayek widened the scope of necessary knowledge to include 'how different commodities can be obtained and used, that is, the general question of why the subjective data of the different persons correspond to the objective facts' (Hayek 1937, pp. 51–2). When this equally crucial knowledge was added to that of pricing information, Hayek concluded that the 'relevant knowledge' necessary to assure a tendency toward equilibrium consisted of what the individual was 'bound to acquire in view of the position in which he originally is, and the plans he makes' (Hayek 1937, p. 53). Hayek emphasized that a dynamic social equilibrium could be obtained 'because some people have no chance of learning about facts, which, if they knew them, would induce them to change their plans' (Hayek 1937, p. 53). Since he assumed that the economy could achieve equilibrium without individuals having access to knowledge that would improve their economic position, the equilibrium he was describing was not 'a sort of optimal position' but rather a resting place (Hayek 1937, p. 53). Thus by using the assumption of the division of knowledge Hayek redefined the concept of equilibrium so that it dealt 'with the compatibility of intentions and expectations of different people, of the division of knowledge

between them, and the process by which the relevant knowledge is acquired and expectations formed' (Hayek 1951, p. 57).

The Socialist Calculation Debate Revisited

In the 1920s Mises had created much debate in Europe with his theoretical proof that economic calculation was impossible in a society organized using the principles of socialism.⁶ In response to his argument, several economists developed proposals of ways to introduce competition into socialist systems in order to have some means for rational recalculation.⁷ In two essays written in 1935 Hayek summarized the nature, history and current state of the socialist calculation debate (1935a and 1935b). In a 1940 article he provided counter-evidence to demonstrate that the proponents of socialism had not yet succeeded in solving the economic calculation problem (Hayek 1940).

Hayek founded his response on two assumptions: first, that the real world was constantly changing and, second, drawing on his concept of the division of knowledge, that knowledge of these variations was dispersed among many individuals in an incomplete and frequently contradictory manner. As a result, Hayek believed that the practical problem underlying economic organization consisted of finding a mechanism that would 'secure a more rapid and complete adjustment to the daily changing conditions of different places and different industries' (Hayek 1940, p. 188).

Much as Knight had evaluated the ethics of social standards by comparing competition and socialism, Hayek framed his rebuttal to the socialist calculation proposals in terms of a comparison between competition and central planning with respect to their efficiency in organizing economic activity. In his comparison he focused on changing conditions as they affected the supply of goods, techniques of production and capital investment. In terms of discovering relevant information regarding the changing conditions of the availability of goods, competition emerged as superior, because price changes immediately directed the individual's attention to the fact of increased scarcity or abundance (Hayek 1940, p. 192). In contrast, the central planning authority could respond only after 'the parties involved have reported [the changed conditions], the reports have been verified, contradictions cleared up, etc., and the new prices will become effective only after all the parties have been notified . . . (at least of those of all possible substitutes) . . .' (Hayek 1940, pp. 192–3).

In terms of discovering relevant information regarding improved methods of production, competition emerged as superior because not only could it incorporate cost-reducing discoveries of existing producers but also it insured 'the opportunity for anybody who knows a cheaper method to come in at his own risk and to attract new customers by underbidding the other producers' (Hayek 1940, p. 196). In contrast, in a centrally planned order, 'any improvement, any adjustment, of the technique of production to changed conditions will be dependent on somebody's capacity of convincing the [planning authority] that the commodity could be produced cheaper and that therefore the price ought to be lowered' (Hayek 1940, p. 196). In terms of the direction of the new investments that assured economic progress, competition emerged as superior because those individuals who possessed the greater amount of knowledge relevant to investment decisions owned the capital. Thus in a competitive order, producers, as the private owners of capital spurred on by the rewards and penalties inherent in the freedom of initiative, could make use of the knowledge discovered by the price system to undertake those investments they judged as most productive. In contrast, in a centrally planned order, the responsibility regarding the future disposition of resources would revert to the central authority. To accomplish an equally productive investment of capital, the central authority would have to accomplish the nearly impossible task of gathering the knowledge divided among producers into a single investment plan (Hayek 1935b, pp. 175–6; 1940, pp. 202–3). Because the central planning authority retained responsibility for the direction of investment, inevitably it would gain extensive power over the direction of production. As a result it would have to decide the division of resources between present and future consumption, the division of laborers between work and leisure, between geographic locations and between occupations, and, finally, the division of products between exports and imports. Thus with respect to the changing economic conditions of supply and demand, of production techniques and of the direction of investment, the competitive order emerged as superior to a centrally planned one by virtue of its ability to discover more knowledge.

Hayek ended his comparison with a warning. Ultimately, in a centrally planned order 'there will be precious little economic activity which will not be more or less immediately guided by arbitrary decision' (Hayek 1940, p. 205). The difficulty inherent in this far-reaching planning was that it required 'a much more extensive agreement among the members of society' regarding which of the many competing needs of

individual members were to be satisfied, and which were to remain unfulfilled (Hayek 1940, p. 206). Hayek believed that eventually one arbitrary scale of values would have to be 'imposed by force and propaganda' (Hayek 1940, p. 206). As a result, a dictatorship would eventually replace central planning.

The Road to Serfdom

In 1944 with the publication of *The Road to Serfdom*, Hayek moved away from scholarly discourse about the inescapability of central planning leading to totalitarianism to write a 'political book . . . derived from certain ultimate values' (Hayek 1944, p. ix). In 1938 at the same time that he was thinking about the socialist calculation debate, he had written an earlier version of the argument in an article entitled 'Freedom and the Economic System' in *Contemporary Review* (Hayek 1938). The University of Chicago Press had also printed a version of the argument in 1939 in the same series of public pamphlets that published Simons's 'Positive Program'.

Like Simons, Hayek championed the rule of law as a means to replace the nineteenth-century version of laissez-faire. In essence, he argued that the only way to avert the 'Road to Serfdom' was the imposition of the rule of law. He defined the rule of law as: 'government in all its actions is bound by rules fixed and announced beforehand – rules which make it possible to foresee with fair certainty how the authority will use its coercive powers in given circumstances and to plan one's individual affairs on the basis of this knowledge' (Hayek 1944, p. 72).

He recommended this approach to policy for both economic and moral reasons. First, individuals could achieve maximum freedom in economic activity, 'because only individuals concerned in each instance can fully know these circumstances [of time and place] and adapt their actions to them' (Hayek 1944, p. 75). Morally, the rule of law was superior because, given that legislators develop rules of law for the long period, they are unable to foresee whom their laws will affect and, as a result, they can remain more impartial.

Hayek's second case for laissez-faire arose out of both external events and theoretical developments. He clearly stated that his later interdisciplinary work, in particular *The Road to Serfdom*, was undertaken in part to respond to external events, in particular the rise of fascism and totalitarianism on the Continent and movements towards socialist nationalism in England. He started his theoretical analysis by

thinking again about knowledge and socialist calculation using the Austrian method. The bits of knowledge required for accomplishing economic activity were dispersed in the minds of individual actors. Individual actions spontaneously created the social institutions of the market, because it was more effective in gathering information than one mind could have designed or planned. Hence the hope of socialists to plan economic activity centrally was doomed because of the knowledge requirements and was dangerous because of the ultimate necessity to limit the freedom of individuals by imposing the values of the central planners. The only way to insure freedom was to develop long-period rules of law, so that individuals could foresee how the government would act and incorporate that information in their plans and so that the rules would be impartial.

CONCLUSION

Clearly both of Hayek's cases for laissez-faire were fully influenced by his pre-analytical decision to extend the Austrian method to study a wider variety of economic and social phenomena. In his first case, he applied the Austrian method to demonstrate how changes in the opinions and intentions of individuals led to a misdirection of production, which, in turn, caused business cycles. The policy recommendation arising from this extension suggested that discretionary policy was futile; rather, to remedy business cycles, governments must wait for the opinions and intentions of individuals to adjust to bring economies back to full employment. In his second case, he extended the Austrian method to develop a subjective concept of equilibrium that emphasized the compatibility of opinions and intentions of members of the social organization. Using this concept of a dynamic social equilibrium, Hayek demonstrated that the price system represented the more efficient means to discover the dispersed knowledge that affected individual expectations. On the basis of this analysis and prompted by his concern about international political movements, in *The Road to Serfdom* Hayek recommended the rule of law as the superior means to organize economic activity, because it provided a more predictable and equitable base for individuals to use in forming their opinions and intentions. Thus, firmly grounded in the Austrian method, Hayek left two cases for laissez-faire that were greatly influenced by working from premises that assumed a one-way causality from the individual to society. As a result,

his recommendation for laissez-faire rules of law was affected by the predisposition toward individualism that the Austrian method represents.

Hayek originated the political philosophy he shared with the pioneers on his second case for laissez-faire, so it is important to highlight its key theoretical foundations. Like Knight, he built a case that focused on the knowledge requirements in a dynamic economy with fundamental uncertainty. In addition, he shared with Knight the belief that it was impossible to apply the method of the natural sciences for prediction and control of economy activity. Thus, both pioneers gave attention to the quality of all-powerful leadership in their respective cases for laissez-faire. At the same time, Hayek's focus was narrower, because he did not seem to place as much emphasis on the qualities of wisdom and benevolent leadership, perhaps a reflection of the political activity that surrounded the development of their cases.⁸

It is also important to note the striking parallels between Hayek's *Road to Serfdom* and Simons's 'Positive Program'. Both were addressed to intellectuals; Simons hoped to persuade orthodox economists, and Hayek aimed to sway the British socialist intelligentsia. Both were alarmed about recent policy changes in their home countries that entailed central planning of economic activity, especially in light of the contemporary movements towards fascism and totalitarianism. Both aspired to change the character of laissez-faire from that of a static, do-nothing policy to one based on an evolving rule of law that took into account the fact of uncertainty. Yet, even with these significant similarities, subtle differences exist between the two arguments that go onto play a significant role in the revival of laissez-faire.

First, Hayek's adaptation of the rule of law is of a different character than that of Simons. Both men recognized that the rule of law had to evolve, but for different reasons. On one hand, Simons drew on his observations about the concentrated nature of the interwar economy to recommend planning a framework of rules that would sustain freedom and equality of opportunity. On the other, Hayek drew on subjectivism and the division of knowledge to recommend planning a framework of rules that reduced uncertainty or, in other words, improved the individual's ability to 'foresee the action of the state and make use of this knowledge as a datum in forming his own plans' (Hayek 1944, p. 81).

Second, both men conceived of equality differently. On one hand, Simons drew on Knight's game metaphor to emphasize the crucial importance of both liberty and equality of opportunity to the realization

of the benefits of classical liberalism. On the other, Hayek stressed that formal equality of opportunity was impossible in a system based on rule of law:

formal equality before the law is in conflict, and in fact, incompatible with any activity of the government deliberately aiming at the material or substantive equality of different people, and that any policy aiming directly at the ideal of distributive justice must lead to the destruction of the rule of law. (Hayek 1944, p. 79)

His reasoning came right out of Austrian economics: 'To give people the same objective opportunities is not to give them the same subjective chance' (Hayek 1944, p. 79). And in a later review of Hayek's *Constitution of Liberty*, (1960) Knight stressed the same point in his criticism of Hayek for ignoring issues of social justice and equality of opportunity:

More serious – man is a social being, and freedom in society rests on agreement on forms and terms of association, that is, free agreement on the laws, or 'government by discussion.' This concept is not mentioned, as far as one notices . . . The book is propaganda for 'government by law' but against law 'making' – law is to be left, or 'almost,' to spontaneous change in tradition. (Knight 1967, p. 451n)

Third, their different views on equality affected what they determined as the proper scope of activity in economic activity. On one hand, Simons recommended such interventionist policies as strengthening the Federal Trade Commission, nationalizing natural monopolies and expanding social and welfare polices as a means to disperse economic and political power. On the other, Hayek argued that a boundary on state activity must exist, because:

We can unfortunately not indefinitely extend the sphere of common action and still leave the individual free in his own sphere. Once the communal sector, in which the state controls all the means, exceeds a certain proportion of the whole, the effects of its actions dominate the whole system. Although the state controls directly the use of only a large part of the available resources, the effects of its decisions on the remaining part of the economic system become so great that indirectly it controls almost everything. (Hayek 1944, pp. 60–61)

This notion of a safe upper limit to government involvement in the economy, in particular, contrasted sharply with Simons's more interventionist

idea of planning a 'positive program for laissez-faire'. As a result, the subsequent pioneers had several models to think about in terms of the scope of social control of economic activity.

The publication of *The Road to Serfdom* also turned out to be an important event in the revival of laissez-faire, both in terms of social relations among the pioneers and of ideas about the role of government in the economy. While Simons's 'Positive Program' attracted devoted followers, Hayek's book became a best seller in both the USA and in Europe. The lecture tours Hayek undertook to meet his admiring readers 'brought him into contact with a larger number of men who held similar ideas on issues raised in the book than I had thought existed . . . such as Henry Simons and his Chicago group, Wilhelm Ropke at Geneva, and a German group led by Walter Eucken' (Hayek 1994, p. 132). Finding so many like-minded individuals ultimately prompted him to found the Mont Pelerin Society which played the important role of providing a place, during the years of the Keynesian consensus, 'for a discussion of the problem which their efforts to revive the liberal tradition raised' (Hayek 1994, pp. 132–3).

NOTES

1. See Reder 1982, pp. 31–2.
2. Not all economists classify Austrian economics as neoclassical. For example, Schumpeter argues that 'there is no more sense in calling the Jevons-Menger-Walras theory neo-classical than there would be in calling the Einstein theory neo-Newtonian' (Schumpeter 1954, p. 919). For the purposes of this study, given that Austrians share the neoclassical focus on problems of scarcity and resource allocation and the use of the rationality postulate, it is assumed that Hayek extended particular theories of the neoclassical economics.
3. Hayek also found evidence of the concept of spontaneous institutions resulting from human action but not human design in the work of Adam Ferguson (1767) and Bernard Mandeville (1928) who had used it to explain the origin of the division of labor, money and language in *The Fable of the Bees*. Further, Hayek maintained that Adam Smith had applied this concept to develop his idea of the invisible hand.
4. Hayek also referred to business cycles as trade cycles and industrial fluctuations. For consistency, this work will use the term business cycle.
5. Hayek also shared the concern of Simons that quantity theorists were driven by concerns to build theories adept for statistical verification, rather than capable of explaining economic behavior (Hayek 1931, p. 3).
6. Mises acknowledged that the central planners in a socialist economy could decide what to produce; their challenge was in deciding how to use the means of production most efficiently when producing the output. He assumed that planners would have to impute the prices of the means of production since they would not have access to money prices determined in competitive markets. In the imputation process, several sites for miscalculation occurred, such as the assignment of overhead costs and overpricing of

commodities due to uneconomic methods of production. Due to the impossibility of economic calculation, efficiency would decrease which in turn would decrease total output (see Mises 1920 and 1922).

7. See for example, Taylor (1929), H. D. Dickinson (1933 and 1939), and Oskar Lange (1938).
8. Editors Stephen Kresge and Leif Wenar date Hayek's 'skepticism towards the actions and motives of government' to his 1923–24 visit to the United States (Kresge and Wenar 1994, p. 7). During that year he spent a considerable amount of time at the New York Public Library reading US accounts of World War I; they conjecture that his discovery in US newspapers that the Austrian government had not been truthful to its own citizens about World War I first led him to doubt the government.

5. Milton Friedman and monetarism

The research of Nobel Laureate Milton Friedman (b. 1912) played a pivotal role in the evolution of the laissez-faire maxim during the years of the Keynesian orthodoxy. In response to changes in both the political and professional environments, Friedman succeeded in placing the neoclassical case for laissez-faire on a new theoretical foundation. As he developed his case, Friedman alluded to both the ideological and the analytic influences Knight, Simons and Hayek had on his thinking. Yet in actuality, Friedman's theoretical case for laissez-faire represented a sharp discontinuity from the research of these individuals, as evident in his adoption of positivistic methods of analysis, his replacement of indeterminate uncertainty with determinate risk, and his Keynesian-inspired reinterpretation of the quantity theory of money.

To understand the transformation Friedman made in the neoclassical case for laissez-faire he inherited from Knight, Simons and Hayek, it is necessary first to consider the environment that surrounded his intellectual development. Friedman came of age as an economist during the 1930s and 1940s, an era different from that of the early professional years of Knight, Simons and Hayek. Events external to the discipline of economics contributing to this change included the Depression, World War II and the beginning of the Cold War. Internal events included provocative extensions of neoclassical economics, a restyling of the economics profession, the rise of econometrics and the application of positivism to the method of economics.

During the 1930s economists undertook extensions of the neoclassical model that had the potential to undermine the theoretical foundations of neoclassical economics. In microeconomic theory, Sraffa contended that Marshall's coupling of partial equilibrium analysis with the existence of external economies, as a means to derive a stable solution in the instance of a decreasing-cost industry was not only ad hoc but also inappropriate. He suggested that a more fruitful avenue to understanding these industries rested on the analysis of internal economies using an extended theory of monopoly (Sraffa 1926). Joan Robinson followed his

counsel in her development of the theory of imperfect competition (Robinson 1933). Edward Chamberlin independently took the same theoretical tack in his development of the theory of monopolistic competition (Chamberlin 1933). In response to these extensions such a gifted theorist as Sir John Hicks remarked

yet it has to be recognized that a general abandonment of the assumption of perfect competition, a universal adoption of monopoly, must have very destructive consequences for economic theory. Under monopoly the stability conditions become indeterminate; and the basis on which economic laws can be constructed is therefore shorn away. (Hicks 1939, pp. 83–4)

Likewise in macroeconomic theory, Keynes challenged the neoclassical position that an economic system with flexible prices assured a full employment equilibrium. He developed a model of aggregate demand that demonstrated the possibility of an underemployment equilibrium and suggested that discretionary policy could move the economy toward full employment (Keynes 1936). This potential for successful government action stood in stark contrast to the policy implications of Hayek's first case for *laissez-faire*: to wait for the slow process of the opinions and intentions of individuals to adjust to bring the economy back to full employment. Thus, as Friedman began his career, neoclassical economics was subject to potentially damaging challenges from extensions of both microeconomic and macroeconomic theory.

In attempting to cope with the massive unemployment of the Depression, politicians and bureaucrats disregarded proposals such as Simons's 'Positive Program' and instead adopted policies that extended government involvement into economic affairs even further than Simons had recommended. The onset of World War II changed the focus of policy-makers from unemployment to inflation and shortages, at the same time as new employees in the military industries earned incomes for the first time in years manufacturers were producing too few domestic goods to absorb this increased purchasing power. After World War II, a change in policy orientation took place when the federal government formally assumed the responsibility to promote full employment using discretionary fiscal and monetary policy in the Employment Act of 1946. In addition, the government increased spending on welfare activities, including the G.I. Bill, health programs and the widening of Social Security benefits, and on defense for the Cold War. Thus, by the second decade of Friedman's career, clear evidence existed in the United States that echoed Hayek's observations about increased government involvement in economic activity in Britain.

By the end of World War II the activities of professional economists extended beyond the university to government agencies and the offices of large corporations.¹ As a consequence their role expanded to include active participation in economic planning.² In part, this change in role resulted from the economic devastation of the Great Depression as political leaders called on economists to plan and administer economic policies. An early visible example consisted of the leading role played by Rexford Tugwell and other institutional economists in designing early New Deal legislation, the very activity that prompted Simons to create the 'Positive Program'. American entry into World War II extended even further the role of economists in economic planning. Governmental agencies utilized their expertise to organize activities ranging from the reallocation of resources to war industries, to the design of war finance and the organization of rationing measures for domestic consumption.³ By 1947, E.A. Goldenweiser, president of the American Economic Association, declared that economists had a new role:

to produce the men, the data, the understanding, and to promote the public support essential to the execution of effective economic policy. To this purpose, the efforts of economists and their Association must be rededicated on this its Diamond Jubilee. The Ivory Tower has been conquered by events and razed to the ground. (Goldenweiser 1947, p. 12)

Thus, as Friedman began his career, economists were no longer following the counsel of Knight to stay in the halls of the academy and engage in dispassionate, philosophical contemplation regarding the implications of idealized, logical constructs such as the model of perfect competition; rather their leaders were asking them to become active participants in the formation and administration of economic policy.

Finally during these years, the method of conducting economic analysis underwent substantial change. In 1930 the Econometric Society was founded with the twin goals of promoting the use of mathematical methods in the development of economic models and the use of statistical techniques to test and estimate parameters of these constructs.⁴ Terence W. Hutchison bolstered these efforts in 1938 when he published his influential study *On the Significance and Basic Postulates of Economic Theory*, making a case for the application of positivism as the proper method for economic analysis. In essence, he argued that to assure scientific progress, economists must derive hypotheses with empirical content such that it was 'possible to indicate intersubjectively what is the case if the[se hypotheses] are true or false; their truth or

falsity, that is, must make some conceivable empirically noticeable difference, or some such difference must be directly deducible therefrom' (Hutchison 1938, p. 10). Conducting the empirical research integral to positivistic methods of analysis was greatly facilitated by the increased subsidization of data collection and statistical analysis by the federal government beginning in 1932 when the US Senate requested the National Bureau for Economic Research (NBER) to collect estimates for national income for 1929–31 (Backhouse 1985, p. 276). In addition, private organizations such as the Cowles Commission, which was located at the University of Chicago from 1939 to 1955, played a major role in supporting new methods of economic analysis that made use of mathematics and statistics. Thus as Friedman began his career, the interwar debate over what role empirical and statistical methods should play in economic research was continuing, but with new ideas added for consideration.

PRE-ANALYTIC FOUNDATIONS

Friedman's career mirrored the ongoing transformation of the economics profession. He moved from the academy to governmental agencies to private research organizations and back again. Furthermore, his natural inclinations and academic training provided him with the skills to navigate these changes well. Two crucial pre-analytic foundations influenced him as he made these changes. First, following the emphasis of many interwar economists, he took as his primary task the elucidation of current economic problems and the efficacy of competing policies in correcting them. Second, he judged competition as the best mode of social control of economic activity.

An account of Friedman's life chronicles the fabled 'rags-to-riches' immigrant story.⁵ He was born in 1912, the child of Eastern European Jewish immigrants, first living in Brooklyn and then moving to Rahway, New Jersey. In Brooklyn, his mother, like many immigrants, worked in a sweatshop, and his father worked as a petty trader. In Rahway, his family lived above the dry goods store and later the ice cream parlor that supported them, even after his father died, when Friedman was a senior in high school. He was awarded a competitive scholarship to fund his undergraduate studies at Rutgers University, then a small, private liberal arts college. He first studied mathematics and statistics to prepare himself for a career as an actuary, but, captivated by his teachers Arthur

F. Burns and Homer Jones, he also became interested in economics. Jones was a student of Knight, who 'first introduced [Friedman] to what even then was known as the Chicago view' (Friedman and Friedman 1998, p. 32). Jones encouraged him to apply for a graduate tuition scholarship in economics at the University of Chicago, and he also applied for one in applied mathematics at Brown University. Happily, he received both, but ultimately he chose economics.

In his graduate studies, Friedman believed he benefited from learning the best of interwar pluralism. During his first year at Chicago, he assisted Henry Schultz who was engaged in pioneering work in the statistical derivation of demand curves while earning his masters degree in economics. He also met fellow graduate student and Knight's research assistant Rose Director, who went on to become his wife and his partner in public policy work. With the help of Schultz, he obtained a fellowship from Columbia University for the next year that paid all of his expenses. Then he returned to Chicago as Schultz's research assistant, this time with a salary. He 'concluded from [his] experience that the ideal combination for a budding economist was a year of study at Chicago, which emphasized theory, followed by a year of study at Columbia, which emphasized institutional influences and empirical work – but only in that order, not the reverse' (Friedman and Friedman 1998, p. 48).

The influential teachers he named included Jacob Viner for economic theory at Chicago; Harold Hotelling for mathematical statistics at Columbia; Mitchell for 'the institutional approach to theory and the various attempts to explain the business cycle'; and John Maurice Clark for economic theory 'applied to empirical problems' (Friedman and Friedman 1998, pp. 43 and 45).

After completing graduate coursework, Friedman spent the next decade in a variety of jobs. In 1935, he joined the collection of brilliant young people converging on New Deal Washington DC and worked for the Industrial Section of the National Resources Committee to gather factual evidence on US consumption expenditures. He moved to NBER in 1937 as an assistant to Simon Kuznets, with whom he completed a statistical study of the incomes of independent professional practitioners, in part, to understand issues related to the distribution of income.⁶ During the early part of World War II he had his first opportunity to form and develop policy in the Department of Treasury, where he helped to reform the federal tax structure both to pay for the war and to prevent inflation. He spent the latter part of the war as a member of the

Statistical Research Group at Columbia University, which conducted statistical analyses for the military. After one-year appointments at the Universities of Wisconsin in 1940–41 and Minnesota in 1945–46, he finally achieved his long-term goal of a permanent home in academia when he returned to the University of Chicago in 1946.

After his return to Chicago in 1946, Friedman began in earnest the life work for which he gained his international reputation. He began to focus on the technical research that eventually secured him the Nobel Prize for Economics in 1976 – ‘his achievements in the fields of consumption, monetary theory and history and for his demonstration of the complexity of stabilization policy’. He also began his public work as an advocate of capitalism and freedom. His theoretical extensions coalesced into the monetarist model that he constructed as a counter-example to the Keynesian-inspired ISLM model and that served as the technical foundation of his case for *laissez-faire*. His advocacy work insured that a strong and articulate voice championed the virtues of *laissez-faire*, both in and out of the academy, during the years of the Keynesian consensus.

The Task of the Economist

When Friedman chose economics over applied mathematics in 1932, he made an implicit statement about his view of the task of the economist. He wrote about this choice after receiving the Nobel Prize:

The reason I chose as I did was not only, perhaps even primarily, the intellectual appeal of economics. Neither was it simply the influence of Homer and Arthur, though that was important. It was at least as much the times . . . The United States was at the bottom of the deepest depression in its history before or since. The dominant problem of the times was economics. How to get out of the depression? How to reduce unemployment? What explained the paradox of great need on the one hand and unused resources on the other? Under the circumstances, becoming an economist seemed more relevant to the burning issues of the day than becoming an applied mathematician. (Friedman 1986, pp. 82–3)

Thus, in choosing his life’s work, he wanted to devote his energy and talents to a form of analysis that had relevance, a goal akin to that of Simons and other interwar economists who aimed to use their work to solve problems. His mode of problem solving also linked economic explanation with public policy. He later explained his understanding of this relationship:

Technical economics and public policy are intimately connected. Every public-policy issue involves two steps: predicting the consequences of a suggested policy and evaluating those consequences as good or bad. The first step is the domain of science, the second, of values. The distinction is easy to state but it is far from easy to keep one domain from intruding on the other. (Friedman and Friedman 1998, p. 213)

In this view, he made the scientific task of economics prediction, something many interwar economists argued was impossible, including Knight and Hayek. And while his recognition of the difficulty inherent in separating prediction from personal values provided evidence that he shared this interwar concern, ultimately he took a leading role in moving the scientific status of analysis from the interwar emphasis on the personal integrity of the researcher to a focus on a particular set of methods.

Friedman's Values

Given that Friedman acknowledged the practical difficulty of separating science from values, it is important to examine the values that he brought to his technical economics. Today Friedman has an international reputation as an advocate for capitalism and laissez-faire. But he has claimed that

My interest in public policy and public philosophy was rather casual before I joined the faculty of the University of Chicago. Informal discussions with colleagues and friends stimulated a greater interest, which was reinforced by reading Friedrich Hayek's powerful book *The Road to Serfdom*, by my attendance at the first meeting of the Mont Pelerin Society in 1947, and by discussions with Hayek after he joined the university faculty in 1950. (Friedman and Friedman 1998, p. 333)

He gave an early hint of his 'casual' interest in the issue of social control in one of the initial projects of Knight affinity group forming in the mid-1930s. Friedman, along with his co-editors Homer Jones, George Stigler, and Allen Wallis, decided on the occasion of Knight's thirty-ninth birthday to collect a group of his essays into a volume titled *The Ethics of Competition*. Knight wrote the majority of the essays in the 1920s when he was investigating methodology and the ethical implications of competition; the editors stated that 'the unifying thread may be found in the problem of social control and its various implications' (Friedman et al. 1935). Even before returning to Chicago in 1946,

Friedman's allegiance to competitive capitalism as the better mode for social control became more evident, when he made his first stab as a popular advocate in the pamphlet *Roofs or Ceiling? The Current Housing Problem* (Friedman and Stigler 1946). He and his co-author Stigler presented an economic argument for replacing rent controls with free markets as a means to remedy the post-World War II housing shortage, a line of reasoning so controversial at the time that a reviewer in the *American Economic Review* characterized the pamphlet 'as a political tract of the same species as, e.g., *The Road to Serfdom*' (Bangs 1947, p. 482). After returning to Chicago, Friedman's brother-in-law Aaron Director was the friend and colleague who secured the invitation for Friedman to participate in the 1947 inaugural meeting of the Mont Pelerin Society. For Friedman, this meeting became an important event in his life for two reasons. First, it 'strengthened [his] incipient interest in political philosophy and public policy' (Friedman and Friedman 1998, p. 158). Second, it brought him into contact with people from around the world, 'all dedicated to the same liberal principles as [Friedman, Knight and Director] were; all beleaguered in their own countries' (Friedman and Friedman 1998, p. 159). This trip was soon followed by the publication of a more measured form of advocacy, 'A Monetary and Fiscal Framework for Economic Stability'. This updating of Simons's 'Positive Program' included an explicit statement of Friedman's preference for both rules-based policies and a 'market mechanism within a "competitive order" to organize the utilization of economic resources' (Friedman 1948, p. 134). In this instance, much like Simons, he presented his policy proposal to fellow intellectuals, statisticians and economists, for 'the test of professional criticism' (Friedman 1948, p. 156).

In 1962, Friedman presented a detailed description of his political philosophy in *Capitalism and Freedom*, a book that grew out of a series of lectures he gave in 1956. Friedman centered his political philosophy on 'the ideals of free men in a free society' (Friedman 1962, p. 1). When conceptualizing society, he explicitly rejected the organicism of Simons: 'To the free man, the country is the collection of individuals who compose it, not something over and above them' (Friedman 1962, pp. 1–2). Due to the supremacy of the free individual, government had a problematical role in social control: 'Government is necessary to preserve our freedom, it is an instrument through which we can exercise our freedom; yet by concentrating power in political hands, it is also a threat to freedom' (Friedman 1962, p. 2). The threat of centralization

was twofold. First, corrupt leaders would eventually replace benevolent leaders. Second, he added a new concern, that centralization would substitute 'uniform mediocrity' for the diversity of ideas and experiments fostered in free society (Friedman 1962, p. 4). Following from these observations, when investigating the ideal mode of social control, his question became what type of social arrangements would insure maximum freedom for the individual members of society, including controlling the coercive power of the government. His answer was 'competitive capitalism – the organization of the bulk of economic activity through private enterprise operating in a free market – as a system of economic freedom and a necessary condition for political freedom' (Friedman 1962, p. 4).

Friedman presented two types of evidence to substantiate his answer – historical and logical. In his estimation, historical evidence provided 'no example' of a society whose citizens possessed a large amount of political freedom who did not use a 'free market to organize the bulk of economic activity' (Friedman 1962, p. 9). Examples included the golden age of Greece, the early years of Rome and the nineteenth and early twentieth century in Europe. At the same time, historical evidence suggested that capitalism was a necessary, but not a sufficient, condition for political freedom. Examples included Fascist Italy and Fascist Spain, Japan before the world wars, Tsarist Russia, all countries that had a capitalist economy but limited political freedom. Friedman acknowledged that the collectivist trend that Hayek warned about in *The Road to Serfdom* reversed in many countries after World War II; as a result, 'historical evidence by itself can never be convincing' (Friedman 1962, p. 11).

Friedman then turned to logical analysis to provide a second type of evidence for competitive capitalism. He based this analysis on several key propositions. First, humans were imperfect, so social arrangements needed to channel behavior in a positive fashion. Second, in an advanced society, the development of enterprises and the division of labor created 'widespread interdependence' in economic activity (Friedman 1962, p. 13). Third, two methods of coordinating this interdependent economic activity were available: 'central direction involving the use of coercion' or 'voluntary co-operation of individuals' (Friedman 1962, p. 13). Since Friedman aimed to provide evidence to support competitive capitalism, he next defined voluntary cooperation of individuals: that 'both parties to an economic transaction benefit from it, *provided the transaction is bi-laterally voluntary and informed*'

(Friedman 1962, p. 13). The conditions necessary to achieve voluntary cooperation were private enterprise, because 'the ultimate contracting parties are individuals', and freedom to enter or not to enter exchanges, because 'every transaction is voluntary' (Friedman 1962, p. 14). The government also had a role to play in a system of voluntary cooperation, that of creating 'a forum for determining the "rules of the game" and as an umpire to interpret and enforce the rules decided on' (Friedman 1962, p. 15). For the government to serve this role effectively, social arrangements must also include the means for the free discussion necessary for 'a broad underlying social consensus' about 'the general customary and legal framework' within which economic activity took place (Friedman 1962, p. 25).

In Friedman's judgment, the benefits of social control using competitive capitalism were fourfold. First, following from his view of imperfect humans, 'it prevents one person from interfering with another in respect of most of his activities' (Friedman 1962, p. 15). Second, it permitted wider diversity in both goods and ideas, because it narrowed the required area of social consensus to fixing the rules of the game. Third, it reduced the coercive political power inherent in central direction of economic activity. Finally, it increased the opportunity for minority groups to advocate for radical political change, a point he illustrated extensively including examples from the McCarthy investigations.

In the preface to *Capitalism and Freedom*, Friedman identified the early laissez-faire pioneers as some of the colleagues and friends who influenced his thinking: 'I owe the philosophy expressed in this book and much of its detail to many teachers, colleagues, and friends, above all to a distinguished group I have been privileged to be associated with at the University of Chicago: Frank H. Knight, Henry C. Simons, Lloyd W. Mints, Aaron Director, Friedrich A. Hayek, George J. Stigler' (Friedman 1962, Preface).

Yet while much of his philosophy carries on the tradition of Knight and Simons in recommending the ideals of capitalism and freedom, subtle differences do exist that bring his thinking more in line with that of Hayek. First, in defining society as purely individualistic, he immediately cast off the elements of organicism underlying Simons's case for laissez-faire. Second, like the Knight of the 1930s, his concern about centralization rested on the potential for corruption, but he also was uneasy about the possible loss of the diversity of ideas. Third, like all three pioneers, he drew on a game metaphor to explain the optimality of rules-based policies. In his case, he borrowed Hayek's idea of spontaneous institutions to

describe the evolution of rules over time: 'As in games, so also in society, most of the general conditions are the unintended outcome of custom, accepted unthinkingly. At most, we consider only minor modifications in them' (Friedman 1962, p. 25). Friedman also followed Hayek in emphasizing an upper limit for the scope of government intervention beyond which would automatically circumscribe individual freedom. In fact, he drew on this idea to justify the continuation of the private monopolies that Simons wanted to nationalize: 'This is an important reason why many earlier liberals, like Henry Simons, writing at a time when government was small by today's standards, were willing to have government undertake activities that today's liberals would not accept now that the government has become so overgrown' (Friedman 1962, p. 32).

Finally, in Friedman's vision of competitive capitalism, the ideal of equality played a secondary role. In fact, in direct contrast with Simons, he highlighted a positive function of the inequality of wealth – that of preserving political freedom using patrons. In a free society, individuals have the political freedom 'to advocate and propagandize openly for a radical change in the structure of society – so long as the advocacy is restricted to persuasion and does not include force or other forms of coercion' (Friedman 1962, p. 16). Yet Friedman believed that freedom was powerless if individuals did not have access to funds necessary for effective advocacy. Friedman did recognize that true political freedom required access to funds for effective advocacy. But it was Friedman's belief that the inequality of wealth characteristic of capitalism, rather than the equality of wealth characteristic of socialism, provided the poor advocate with greater access to financial resources. In a capitalist system, the individual 'only had to convince a few wealthy people to get funds to launch any idea, however strange', while in a socialist system the individual had to persuade many individuals to obtain the same amount of funds (Friedman 1962, p. 17). To substantiate this point Friedman cited Friedrich Engels's support of Karl Marx.

Friedman came to his macroeconomic research with the goal that it be instrumental in elucidating contemporary problems and the effectiveness of proposed policies in correcting them. At the same time, he began his extension with both a commitment to a particular set of values he had taken from Knight, Simons and Hayek, and an understanding of economic research that suggested science and values were difficult to separate in practice. The convergence of his technical economics and his commitment to the political philosophy of liberalism ultimately left Friedman with a dilemma. Because, in effect, as he conducted his macroeconomic

research, he was under the sway of two conflicting intellectual currents. On one side, his ideological influences, Knight, Simons and Hayek, had constructed a theoretical case for laissez-faire that relied on anti-positivistic methods, an exploration of the imperfect character of knowledge and, in Simons's case organicism, to develop a dynamic model of the economy with an indeterminate solution. On the other side, Keynesian economists were following Hutchison's counsel to develop hypotheses with empirical content.⁷ As a result of these conflicting influences, an underlying tension in Friedman's work became evident as he endeavored to present his macroeconomic research as an outgrowth of the Chicago theoretical tradition while, at the same time, the bulk of the research underlying his case for laissez-faire broke with that tradition. Thus, in reconstructing Friedman's case for laissez-faire, careful attention will be paid to the manner in which the conflicting influences of Knight, Simons and Hayek and the Keynesian economists ultimately affected both the substance and the presentation of Friedman's research.

FRIEDMAN'S DESTRUCTION OF THE KNOWLEDGE-BASED CASE FOR LAISSEZ-FAIRE

Although Friedman shared an ideological commitment to laissez-faire with Knight, Simons and Hayek, ultimately he undercut the analytic foundation on which their advocacy for this doctrine rested. In a series of papers written during the late 1940s and early 1950s, he developed ideas that in effect undermined the knowledge-based case for laissez-faire that he inherited from Knight, Simons and Hayek. First, he developed the method of positive economics, which replaced the methods of Knight and Hayek, who had relied on apriorism and the canons of logic to establish economic truths, with an instrumental version of positivism⁸ that aimed at developing better tools in order to make 'valid and meaningful (i.e., not truistic) predictions about phenomena not yet observed' (Friedman 1953a, p. 7).⁹ Simultaneously, Friedman collaborated with L.J. Savage to develop the expected utility hypothesis that replaced Knight's notion of indeterminate uncertainty with determinate risk.

The Methodology of Positive Economics

Beginning in the late 1940s, Friedman's concern with methodological issues became more evident in his writings. His main ideas first

appeared in a 1946 book review about Oscar Lange's *Price Flexibility and Employment* (Friedman 1946). In particular, he was dissatisfied with the formalism of Walrasian-inspired neoclassical economics, which focused on 'abstractness, generality, and mathematical elegance . . . [as] ends in themselves' (Friedman 1949a, p. 91). His concern about formalism harkened back to his fundamental belief that the economist served ultimately to solve problems:

A man who has a burning interest in pressing issues of public policy, who has a strong desire to learn how the economic system works in order that knowledge may be used, is not likely to stay within the bounds of a method of analysis that denies him the knowledge he seeks. He will escape the shackles of formalism, even if he has to resort to illogical devices and specious reasoning to do so. (Friedman 1946, p. 300)

Instead, strongly influenced by Viner's presentation of economic theory, he recommended a return to a Marshallian-inspired analysis that conceived of economic theory as 'an engine for the discovery of concrete truth'. In 1947, he went on to write the first draft of the essay that ultimately became the methodology of positive economics.¹⁰

As a first step in his development of the method of positive economics, Friedman identified two gaps in contemporary methodological practice. First, he worked from John Neville Keynes's (1891) earlier charge to economists to construct a distinct positive science of economics, contending that economists had failed to establish criteria of acceptability to determine 'whether a suggested hypothesis or theory should be tentatively accepted as part of the "body of systemized knowledge" concerning what is' (Friedman 1953a, p. 3). In addition, he criticized the 'undue emphasis on the descriptive realism of "assumptions" [that] has contributed to neglect of the critical problem of determining the limits of validity of the various hypotheses that together constitute existing [relative price theory and static monetary theory]' (Friedman 1953a, p. 42). In this regard he made particular reference to the research of Thorstein Veblen and the 1940s debate in the *American Economic Review* regarding the maximization-of-returns hypothesis and Chamberlin's and Robinson's theories of monopolistic and imperfect competition (Friedman 1953a, pp. 30–31 and 38).

Friedman started his methodological treatise by defining positive economics: 'Its task is to provide a system of generalizations that can be used to make predictions about the consequences of any changes in

circumstances. Its performance is to be judged by the precision, scope, and conformity with experience of the predictions it yields' (Friedman 1953a, p. 4). To realize this purpose the analyst must develop 'a "theory" or "hypothesis" that yields valid and meaningful (i.e., not truistic) predictions about phenomena not yet observed' (Friedman 1953a, p. 7). The theory or hypothesis consisted of a mixture of two elements. In the Marshallian tradition adopted by Knight and Viner, theory served as a language or filing system that promoted 'systematic and organized methods of reasoning' (Marshall 1885, p. 164). In this role its validity was checked by the canons of formal logic and by factual evidence that substantiated whether categories had meaningful empirical counterparts. But Friedman also believed theory served as a body of substantive hypotheses designed to abstract essential features of complex reality. In this role, the validity of a theory was established in empirical tests. First, the theory's predictions were compared with empirical data regarding real world occurrences to establish that the hypotheses were not falsified by empirical evidence. Second, in the event that several hypotheses remained that were not falsified by empirical evidence, validity was established by ranking the survivors. Friedman offered several criteria for accomplishing this ranking: simplicity, which encompassed the notion that 'theory is "simpler" the less initial knowledge needed to make a prediction within a given field of phenomena' and fruitfulness, which encompassed the notion that a theory 'is more "fruitful" the more precise the resulting predictions, and the more additional lines for further research it suggests' (Friedman 1953a, p. 10). Of subsidiary importance in validating hypotheses, Friedman cited logical completeness and consistency, which encompassed the notion that 'the hypothesis says what it is intended to say and does so alike for all users' (Friedman 1953a, p. 10). Friedman did acknowledge that the choice among surviving hypotheses remained somewhat arbitrary in economic analysis due to the impossibility of conducting crucial experiments. Yet at the same time, he consistently appealed to the logical positivists' unity of science notion¹¹ in this essay and other writings to suggest that the natural sciences shared the same problem (see for example Friedman 1953a, p. 10).

Friedman's new method emphasized that the conformity with reality of outcomes, and not initial assumptions, served as the key factor in validating theories. But as a final step in his analysis, he strengthened his argument by demonstrating that the accuracy of initial assumptions was

immaterial. He began this discussion by postulating that the assumptions of theory were, in fact, ‘wildly inaccurate descriptions of reality’ (Friedman 1953a, p. 14). Then he asserted that this quality of theory development was not surprising, but rather, followed directly from the simplicity criterion for ranking hypotheses: ‘a hypothesis is important if it “explains” much by little . . . To be important, therefore, a hypothesis must be descriptively false in its assumptions’ from the outset (Friedman 1953a, p. 14). To bolster this position, once again, he appealed to a similar methodological tack adopted by natural scientists (Friedman 1953a, pp. 16–19).

Yet even though initial assumptions did not operate to approximate observed conditions, Friedman did believe they served a subsidiary role in analysis. First, they specified ‘the set of rules defining the class of phenomena for which the “model” can be taken to be an adequate representation of the “real world” ’ (Friedman 1953a, p. 24). Second, prior to empirical testing, initial assumptions facilitated an indirect testing of the acceptability of a hypothesis ‘by bringing out its kinship with other hypotheses’ (Friedman 1953a, p. 28).

Given that Friedman believed that it was difficult in practice to separate technical economics from values in public policy discussions, an understanding of how he intended the methodology of positive economics to remedy this problem is crucial to interpreting his work. As a first step, Friedman harkened back to the distinction John Neville Keynes made between positive and normative economics: ‘a positive science . . . [was] a body of systemized knowledge concerning what is; a normative or regulative science . . . [was] a body of systemized knowledge discussing criteria of what ought to be’ (Keynes in Friedman 1953a, p. 3). Friedman maintained that the scientific judgments of positive economics were ‘in principle independent of any particular ethical position or normative judgment’ (Friedman 1953a, p. 5). And in 1953, he evinced much optimism that:

differences about economic policy among disinterested citizens derive predominantly from different predictions about the economic consequences of taking action – differences that in principle can be eliminated by the progress of positive economics – rather than from fundamental differences in basic values, differences about which men can ultimately fight. (Friedman 1953a, p. 5)

Yet, even then, he left an opening for the values of the economist to enter scientific analysis:

The construction of hypotheses is a creative act of inspiration, intuition, invention; its essence is the vision of something new in familiar material. The process must be discussed in psychological, not logical categories; studied in autobiographies and biographies; not treatises on scientific method; and promoted by maxim and example, not syllogism or theorem. (Friedman 1953a, p. 43)

In later years, Friedman began to acknowledge that in some other instances economists disagreed on normative policy recommendations. He attributed these disagreements to either differences in scientific judgments, which have been defined as conclusions about the consequences of taking an action, or to differences in values, which were conclusions about 'the *desirability* of those consequences' (Friedman 1968b p. 5). Though he still maintained that differences in scientific judgments accounted for the majority of disagreement, Friedman did admit two avenues whereby differences in values could influence scientific judgments and ultimately account for disagreements among economists about policy issues (Friedman 1968b, p. 6). First, scientific judgments 'necessarily involve elements of uncertainty' due to the fact that economic phenomena were 'complex, varied and interdependent'; as a result, 'a scholar's values undoubtedly affect the way he resolves the inevitable uncertainties in his scientific judgment', and in that fashion values influenced policy recommendations (Friedman 1968b, pp. 6–7). Values also influenced the interpretations of positive analysis in terms of the differences in time preferences of the positive analysts; for in making scientific judgments some individuals tended to focus on the long-run consequences of policy while others focused on the short-run consequences (Friedman 1968b, p. 7).

Application of the methodology of positive economics transformed the character of the neoclassical economics that Friedman had inherited from Knight, Simons and Hayek. Whereas his intellectual mentors had maintained that the appropriate method of neoclassical economics led analysts to focus on the processes of economic activity, Friedman emphasized prediction. Whereas Knight and Hayek highlighted the distinction between the natural and social sciences, Friedman emphasized their unity. Whereas Simons built models to make initial assumptions approximate reality, Friedman's method highlighted outcomes and the conformity of those outcomes with reality. But even more important for the evolution of the attitude toward *laissez-faire*, as a result of developing the methodology of positive economics, Friedman removed an important link in the theoretical case for *laissez-faire* he had inherited from Knight, Simons and Hayek.¹²

The Expected Utility Hypothesis

For the method of positive economics to accomplish its purpose, analysts needed to develop theories that they could verify empirically. Yet the dynamic theories of perfect competition that Friedman inherited from Knight, Simons and Hayek did not possess this capacity, because the manner in which these analysts modeled uncertainty led to theoretical outcomes that were indeterminate. Thus if Friedman was to follow the methodology of positive economics, he needed to find a way to model uncertainty such that the outcomes of his models were determinate and, therefore, capable of empirical verification. Friedman developed such a method when he worked with Savage to extend the expected utility hypothesis developed by J. von Neumann and Oscar Morgenstern (Friedman and Savage 1948, p. 281; 1952, p. 463).¹³ Friedman met Savage, an accomplished statistician, while working at the Statistical Research Group in the latter years of World War II. They both moved to Chicago in 1946 and began this line of research.

Friedman and Savage extended the Neumann and Morgenstern expected utility hypothesis in order 'that an important class of reactions of individuals to risk can be rationalized by a rather simple extension of orthodox utility analysis' (Friedman and Savage 1948, p. 279). They undertook this extension because they regarded the common method of rationalizing choices among certain and uncertain alternatives as inconsistent. Choices among certain alternatives were rationalized 'in terms of consistent preferences for the goods in question and deliberative selection of the alternative highest in the scale of preferences', while choices among risky alternatives were rationalized 'in terms of ill-defined preferences for "risk" or "uncertainty," generally regarded as "irrational" ' (Friedman and Savage 1952, p. 463).

To remedy this inconsistency, Friedman and Savage aimed to develop a hypothesis that provided 'a unified interpretation of two kinds of economic behavior' in terms of orthodox utility analysis (Friedman and Savage 1952, p. 463). They justified this approach by relying on the methodological ideas that Friedman was working on simultaneously. For example, they relied on Friedman's assertion that a hypothesis gained 'indirect plausibility from the success of other classes of phenomena of hypotheses that can also be said to make this assumption' (Friedman 1953a, p. 28). Thus, since the maximization-of-utility hypothesis worked well in modeling situations characterized by certainty, it was acceptable to extend this hypothesis to situations characterized by uncertainty. In

addition they sought to extend the expected utility hypothesis because it had 'potentially rich empirical content', and it offered an alternative means for modeling uncertainty that analysts could eventually use to rank with other hypotheses on the basis of empirical tests (Friedman and Savage 1952, p. 463).

The crucial step in their analysis was defining the effect uncertainty had on economic behavior and then on that basis determining which decisions were affected by uncertainty and which were subject to elements of risk. At the outset of their analysis, they acknowledged the validity of Knight's theoretical distinction between risk and uncertainty. Uncertainty was important because it introduced 'a qualitative new element in economic behavior'; it led economic actors to take actions they might not have taken in a certain environment (Friedman 1949b, p. 196). But while ostensibly accepting Knight's theoretical position, they refuted the essence of his argument. For they stated that uncertainty might not change economic behavior if 'for certain classes of problems there may exist a set of data, which, if known with certainty, would lead to the same action as each possible uncertain situation' (Friedman 1949b, p. 196). These situations had certainty-equivalents and could be modeled as if they were subject to calculable risk. Friedman and Savage proceeded to classify 'the major decisions of an individual in which risk plays an important role [as those that] concern the employment of resources he controls: what occupations to follow, what entrepreneurial activity to engage in, how to invest in human capital' (Friedman and Savage, 1948, p. 283) and how to invest in securities (Friedman and Savage 1948, p. 279; Friedman 1949b, p. 196).

In order to determine what action an individual would take in situations with certainty-equivalents, Friedman and Savage made a series of postulates. Individuals sought to maximize the expected utility of an action undertaken. Each uncertain alternative corresponded to some expected utility; and 'there is some certain income whose utility is equal to this expected utility' (Friedman 1949b, p. 197). The certain income, which equals the expected utility, became the certainty-equivalent that could serve as the basis for empirical research.

Friedman and Savage acknowledged that validation of the use of the expected utility hypothesis required empirical tests, and as a consequence, 'confidence in this hypothesis derives largely from its coherence with the body of economic theory and, more importantly, from the plausibility of the postulates with which it can be shown to be equivalent rather than from repeated success in prediction' (Friedman and Savage

1952, p. 474). But a later statement made by Friedman evidenced his de facto acceptance of the expected utility hypothesis and, more important, his explicit rejection of Knight's theoretical distinction between risk and uncertainty:

In his seminal work, Frank Knight drew a sharp distinction between *risk*, as referring to events subject to a known or knowable probability and distribution and *uncertainty*, as referring to events for which it is not possible to specify numerical probabilities. I have not referred to this distinction because I do not believe that it is valid . . . We may treat people as if they assign numerical probabilities to every conceivable event. (Friedman 1976, p. 282)

In consequence of his acceptance of the expected utility hypothesis, Friedman satisfied his methodological need to model indeterminate uncertainty as determinate risk. As the same time, he removed the second link in the theoretical case for laissez-faire he had inherited from Knight, Simons and Hayek.

FRIEDMAN'S RECONSTRUCTION OF THE THEORETICAL CASE FOR LAISSEZ-FAIRE

Friedman provided the first rudimentary sketch of the theoretical direction of his case for laissez-faire in conjunction with his policy proposal a 'Monetary and Fiscal Framework for Economic Stability' (1948). In response to what he conceived of as the shortsighted preoccupation of Keynesian economists with problems of short-run fluctuations in economic activity, his intent was to present a framework designed to promote long-run efficiency and growth in the economy. The proposal focused on reforms of the money and banking system, federal budget policy, transfer programs and the tax system. In order to eliminate the private creation and destruction of money and, therefore, to improve the stability of the monetary system, he advocated reform of the banking system along the lines of Simons's 100 per cent reserves proposal, with the added condition that the central bank pay interest on the reserves (Friedman 1948, pp. 135–6). With this change in the banking system, the primary responsibility of private banks would consist of providing depository facilities and a mechanism for check clearing; the chief responsibility of the monetary authority would consist of creating money to meet government deficits and retiring money in the event of government surpluses via the issue of non-interest bearing securities

(Friedman 1948, pp. 136–7). To assure further economic stability, Friedman recommended that in determining the volume of government expenditures on goods and services, policymakers should focus ‘entirely on . . . the community’s desire, need, and willingness to pay for public services’ rather than relying on discretionary policies to vary expenditures in response to cyclical changes in economic activity (Friedman 1948, p. 136). Likewise, the government should take a similar approach with respect to transfer expenditures and tax policy; changes should be made in response to the needs of the community not to the needs of counter-cyclical policy (Friedman 1948, p. 137). Tax rates and transfer payments should be ‘set in light of the expected yield at a level of income corresponding to reasonable full employment at a predetermined level’ (Friedman 1948, p. 137). The ‘budget principle’ should balance revenues and expenditures at the hypothetical level of full employment income or it ‘should lead to a deficit sufficient to provide some secular increase in the quantity of money’ (Friedman 1948, p. 137). In place of discretionary counter-cyclical policy to provide economic stability, Friedman proposed the use of ‘automatic adaptations in the government contribution to the current income stream to offset, at least in part, changes in other segments of aggregate demand and to change appropriately the supply of money’ (Friedman 1948, p. 139).

Note that the primary importance that Simons placed in the ‘Positive Program’ on ending monopoly was not evident in Friedman’s proposal for economic stability. Rather he discussed price rigidities as an institutional condition akin to lags in response. His stated change in emphasis stemmed in part from his view of the proposal, ‘which is concerned not with short-run policy, but with structural reform’ (Friedman 1948, p. 156). In *Capitalism and Freedom* he provided an additional reason for his change in emphasis: ‘In a rapidly changing society, however, the conditions making for technical monopoly frequently change’ (Friedman 1962, p. 28).

In building the theoretical foundation for this proposal, Friedman’s research progressed through several steps. As a first step he identified gaps in existent macroeconomic analysis. The first gap he identified consisted of the neglect of economists to study the actual effectiveness of counter-cyclical policies (Friedman 1951, p. 118). His investigation of the effectiveness of counter-cyclical policy resulted in strengthening his case for the superiority of automatic adaptations in government budget over discretionary policy. The second gap Friedman identified consisted of the neglect of Keynesian economists to study the effect of

monetary changes on the aggregate level of income and employment. In response he constructed the monetarist model as a non-interventionist counter-example to the Keynesian model of the macro economy. In accordance with the tenets of his method of positive economics, he subjected this model to empirical tests; as interpreted by Friedman and his colleagues, these tests failed to falsify monetarist theory (Friedman and Meiselman 1963; Friedman and Schwartz 1963a and 1963b). As a result, Friedman offered a new theoretical foundation on which to base his advocacy for a laissez-faire policy of a stable framework of rules to assure economic stability.

The Effectiveness of Counter-Cyclical Policy

Friedman's early criticism of the Keynesian ISLM model highlighted numerous defects: its 'neglect of price movements', its presentation of a system with 'no lags' and its lack of analysis of cyclical fluctuations (Friedman 1951, pp. 118–20). Yet initially, he chose not to address these theoretical shortcomings; instead, he focused on a general failure by macroeconomists to analyze fully the stability implications of the ISLM model. In this regard not only did Friedman fault the Keynesian economists (Friedman 1947, p. 316; and 1951, pp. 117–18), but also, while not mentioning Knight, Simons or Hayek by name, he cited a similar neglect by opponents of full employment policies who had restricted their critiques to demonstrations 'that such policies would strengthen the role of government and threaten political freedom, or would reduce the rate of progress, or would strengthen pressure groups and promote inflation' (Friedman 1951, p. 118).

Friedman attributed the failure of economists to investigate the effectiveness of counter-cyclical policy to the 'naive theoretical model' on which they based their policy recommendations (Friedman 1951, p. 118). As constructed, the ISLM model was incapable of addressing this problem because in it 'the optimum magnitude of government action is that which produces stability of income, and there is nothing in the model to indicate that this result is incapable of attainment or that it requires knowledge not now available or what factor will interfere with its attainment' (Friedman 1951, p. 121). Due to the inability of the ISLM model to address the issue of policy effectiveness, Friedman investigated 'these questions by a different route, one suggested by the theory of statistics rather than economic theory' (Friedman 1951, p. 121).

In his analysis Friedman represented counter-cyclical policies in the

form of two statistical parameters. The first symbolized the magnitude of the effect of the policy action and the second the timing of the policy action. In terms of the magnitude of the effect, Friedman demonstrated that a larger impact on the level of employment occurred the more vigorous the policy action undertaken. Thus he accepted that policymakers could control this parameter. At the same time, a determination of an optimal magnitude of action would be complicated by the variability of the lag effects, correlations among components of national income and the size and the character of indirect influences such as the multiplier process and the effects on the stock of money (Friedman 1951, p. 128). In terms of the timing of the effect of the policy action, Friedman demonstrated that if policy actions were random, 'that is . . . about as likely to have effects in the wrong as in the right direction', they would destabilize the economy (Friedman 1951, p. 124). Thus in order for counter-cyclical policy not to destabilize the economy, 'a relatively high frequency of right to wrong actions is required' (Friedman 1951, p. 121). Friedman did not believe that economists possessed sufficient analytic knowledge to adequately control the timing of policy actions (Friedman 1951, p. 127).

Friedman relied on his statistical analysis of counter-cyclical policy to begin the process of reconstructing the neoclassical case for *laissez-faire*. He cited his research as providing preliminary substantiation of his advocacy of automatic adaptations presented in his proposal a 'Monetary and Fiscal Framework for Economic Stability'. For while many 'criticized [automatic adaptations] for not doing enough', Friedman contended that his research demonstrated that 'vigorous counter-cyclical action may result in more instability than milder action' (Friedman 1951, pp. 130, 132).

The Monetarist Model

It remained for Friedman to remedy the neglect of the Keynesian economists to investigate the influence of monetary effects on the economy. He published several papers in the late 1940s and early 1950s that provided a general indication of what direction this research would take in the discussion of wealth as the channel by which monetary changes altered the levels of employment and output (Friedman 1953b, 1948, 1951).¹⁴ In 1956 Friedman presented his first formal model to analyze monetary effects on economic activity.

Friedman took care to present the monetarist model as continuing the

theoretical tradition of 'Henry Simons and Lloyd Mints directly, Frank Knight and Jacob Viner at one remove' (Friedman 1956, p. 3). In part Friedman explained his decision to develop the monetarist model in the framework of the quantity theory by appealing to a 'Chicago oral tradition throughout the 1930s and 1940s where students continued to study monetary theory and to write theses on monetary problems' (Friedman 1956, p. 3). In his estimation, the merit of the Chicago version of the quantity theory was rooted in the fact that

It was a theoretical approach that insisted money does matter – that any interpretation of short-term movements in economic activity is likely to be seriously at fault if it neglects monetary changes and repercussions and if it leaves unexplained why people are willing to hold a particular nominal quantity of money in existence (Friedman 1956, p. 3).

Friedman believed that no 'systematic statement of the theory exists', and he intended to remedy the Keynesian neglect of monetary factors by completing a formalization of the 'Chicago oral tradition' (Friedman 1956, p. 3). The monetarist theory he developed had two components: a theory of demand for money and a theory of nominal income.

Friedman began his analysis of the demand for money by assuming that money represented one type of asset in which to hold wealth. As such, a theory of the demand for money was in effect a special topic in the theory of capital (Friedman 1956, p. 4). Note that by classifying the theory of the demand for money as a type of capital theory, Friedman followed the same theoretical convention Knight had used in his presentation of capital theory. Recall that Knight had emphasized that when an entrepreneur determined to invest in capital his decision was based on his perceptions of the underlying capital structure of the economy rather than, as subjectivist Hayek had argued, a time preference for future versus present consumption. Friedman took the same tack as Knight in arguing that the decision to hold money was related to the individual's perceptions of the underlying asset structure of the economy. In both instances, the focus on the individual's perceptions underlying structural conditions led Knight and Friedman to study aggregates, a form of analysis that was precluded by the Austrian method.

Friedman continued his analysis of the demand for money by specifying the variables that determined a wealth-holding unit's demand for real balances.¹⁵ These variables included: the ratio of human to non-human wealth; the expected rates of return on equities and bonds; expected changes in the prices of these assets over time; money income;

and a portmanteau variable that stands for factors other than income that affect the service utility of money. Putting these variables into a functional form Friedman posited that a wealth-holding unit would maximize the utility of holding real balances such that 'the rate at which [it] *can* substitute one form of wealth for another is equal to the rate at which [it] is just willing to do so' (Friedman 1956, p. 5).

Friedman worked from the demand for money function to develop a rudimentary theory of nominal income. In contrast with Simons, he assumed that 'the supply of money in nominal units is regarded as fixed or more or less autonomously determined' (Friedman 1956, p. 15). He rewrote the demand for money equation in a quantity theory format:

$$Y = v \times M \times 1/P$$

Where, Y was nominal income, v was the velocity of circulation, M was the quantity of money, and P was the price level. Under these conditions, the theory of nominal income 'says that changes in money income mirror changes in the nominal quantity of money' (Friedman 1956, p. 12).

Friedman contended that 'almost every economist will accept the general lines of [his] analysis on a purely formal and abstract level' (Friedman 1956, p. 15). But when using this analysis as a theory to understand short-run and long-run movements in economic activity, the distinction of the quantity theorist lay in the way he interpreted '(i) the stability and importance of the demand function for money; (ii) the independence of the factors affecting demand and supply; and (iii) the form of the demand function or related functions' (Friedman 1956, p. 15). Regarding these factors a quantity theorist advanced the following hypotheses: that the demand for money was stable; that technical, political and psychological conditions, which affect the supply of money did not affect demand; and that the types of assets in which individuals temporarily stored purchasing power were of a wider variety than normally considered in the Keynesian analysis (Friedman 1956, pp. 16–17). As the next step to his analysis Friedman worked with David Meiselman and Anna J. Schwartz to conduct tests of these hypotheses.

Friedman and Meiselman set up a test to compare the short-run stability of the velocity of monetary circulation versus the multiplier. They specified a linear function in which consumption served as a proxy for income, and its level was determined by the stock of money, the level of autonomous expenditures and the price level. They related a coefficient

representing the velocity of circulation to the stock of money and a coefficient representing the multiplier to the level of autonomous expenditures. Friedman and Meiselman fit this equation to a data set specifying peaks and troughs in the US economy from 1896 to 1957 and excluding the two world wars to determine which coefficient of the two was more stable (Friedman and Meiselman 1963, p. 174).

In their estimation 'the empirical results [we]re remarkably consistent and unambiguous'; the income velocity of circulation was 'consistently and decidedly stabler' than the multiplier, with the exception of the early years of the Depression after 1929 (Friedman and Meiselman 1963, p. 186). They attributed their findings regarding the early years of the Depression to the increased demand for money and accompanying decline in velocity due to 'the unprecedented instability of income, growth of employment, and decline in prices that accompanied an almost unprecedented decline in the stock of money' during the Depression; they explained the close correlation between consumption and autonomous expenditures during that time as a unique 'deep depression phenomenon' (Friedman and Meiselman 1963, p. 188).

Friedman and Meiselman were careful to specify that their empirical test could only establish statistical correlations, which 'may give some evidence on the direction of influence, [although] they cannot be decisive' (Friedman and Meiselman 1963, p. 179). Thus in order to determine the direction of influence between money and consumption, their proxy for income, they recommended the development of accompanying historical studies of particular episodes. They believed that these analyses would reveal 'attendant circumstances [which would provide] strong evidence that changes in one or more of the variables were independent in origin' (Friedman and Meiselman 1963, p. 179).

Friedman presented a historical analysis of this type in *A Monetary History of the United States, 1867–1960* that he prepared in collaboration with Schwartz as part of his work on the NBER project dealing with the role of money in business cycles (Friedman and Schwartz 1963a). In a contemporaneous article, they hypothesized that the observed correlation between income and money was not coincidental. Rather, in their judgment, it implied either that alterations in the stock of money caused income to change or vice versa (Friedman and Schwartz 1963b). In *A Monetary History*, they compared these hypotheses using a linear function of the supply of money that assumed that the separate actions of the monetary authority, bank and public determined the supply of money. They fit this equation to a data set extending from 1867 to 1960.

Based on their empirical analysis Friedman and Schwartz presented four basic conclusions. First, confirming Friedman and Meiselman's results, they contended that 'changes in the behavior of the money stock have been closely associated with changes in economic activity, money income and prices' (Friedman and Schwartz 1963a, p. 676). Second, they contended that statistical evidence indicated that the 'interrelation between money and economic changes has been highly stable', citing statistical series including the relationship between the money stock and prices, the secular decline of velocity and the short-term relationship between the stock of money and cyclical activity (Friedman and Schwartz 1963a, pp. 679–82). Third, they claimed that 'monetary changes have often had an independent origin; they have not been simply a reflection of changes in economic activity' (Friedman and Schwartz 1963a, p. 676). In support they cited the 1897–1914 monetary expansion and concurrent increase in gold production, the monetary expansion during World War I deriving from political decisions that encouraged foreigners to increase shipments of gold to the USA in order to purchase war materials and a later decision by US authorities to expand high-powered money to finance domestic war production (Friedman and Schwartz 1963a, pp. 686–67). Finally, they argued that the stability between changes in monetary and economic activity had been evident in face of the 'radical changes in monetary arrangements' upon establishment of the Federal Reserve (Friedman and Schwartz 1963a, p. 678).

Friedman derived two important conclusions from his empirical tests. First, with respect to scientific analysis, the monetarist model was 'likely to be more fruitful' than the Keynesian model because 'the first correspond[ed] to empirical relations that are far more stable over the course of the business cycle than the second' (Friedman and Meiselman 1963a, p. 213). Second, with respect to economic policy, control over the stock of money appeared to be a more useful tool for affecting the level of expenditures than control over autonomous expenditures (Friedman and Meiselman 1963a, p. 213).

As a result of these findings, Friedman made one modification in his proposal for 'A Monetary and Fiscal Framework for Economic Stability' that limited further the discretionary power of the Federal Reserve. Rather than assuring economic stability by the use of automatic changes in deficits or surpluses in the government budget, he proposed the institution of a money growth rate rule that would instruct the monetary authority 'to use its open market powers to produce a 4% per year rate

of growth in the total currency held by the public and adjusted deposits in commercial banks' to keep final product prices constant (Friedman 1960, p. 100). Note that in making this recommendation Friedman made the crucial assumption that the monetary authority had the ability to control the supply of money. Further, Friedman recommended adoption of this policy because limited analytic knowledge made the money growth rule the only practical alternative:

There is little to be said in theory for [this] rule . . . The case for it is entirely that it would work in practice. There are persuasive theoretical grounds for desiring to vary the rate of growth to offset other factors. The difficulty is that, in practice, we do not know how to do so and by how much. In practice, therefore, deviations from the simple rule have been destabilizing rather than the reverse. (Friedman 1960, p. 98)

Friedman succeeded in reconstructing the neoclassical case for laissez-faire on a macroeconomic level. The monetarist model as he formalized and tested it substantiated his advocacy for a movement to a governmental role in the monetary sphere that relied on a rule of law rather than discretionary power. At the same time his use of the method of positive economics implied that acceptance of his hypothesis relied on a general acceptance of his test results. Neither the Friedman/Meiselman test nor the Friedman/Schwartz test received unqualified approval.

Early on reviewers criticized both studies for incorrectly specifying the test equations. For example regarding the Friedman/Meiselman test, Donald Hester charged that the test equation incorrectly presented the government deficit and net foreign balances as exogenous, autonomous expenditures and that it incorrectly assumed that the structure of the autonomous expenditure model was invariant over time (Hester 1964, p. 363). Albert Ando and Franco Modigliani criticized Friedman and Schwartz for their specification of the consumption function (Ando and Modigliani 1965).¹⁶

Early reviewers criticized the Friedman/Schwartz study because it was not founded on an explicit theory capable of explaining channels by which monetary factors affected the level of income and employment as described in their empirical investigations (Culbertson 1964; Meltzer 1965; Tobin 1965). In response Friedman formalized the rudimentary theory of nominal income he had presented in his 1956 restatement of the quantity theory (Friedman 1969, 1970, 1971). In developing the theory of nominal income he isolated wealth as the channel whereby

monetary factors affected the level of income and employment, and he emphasized the distinction between actual and anticipated magnitudes as the key to explaining different positions of short-run and long-run equilibrium.

Friedman began his discussion of the manner in which money affected the level of income and employment by positing an increase in the quantity of money. As interpreted by Friedman, the demand for money or real balances remained relatively stable; as a result individuals chose to spend their excess cash balances. As they purchased additional goods and services the prices of assets were bid up, the interest rate fell and spending on new assets and current services increased. The manner in which the increased demand for new assets and current services affected nominal income depended on whether individuals anticipated the price increases in existing assets. If they did not instantaneously anticipate the price rise, an expansion in the quantity of money led to increases in both nominal income and the real level of output; if individuals fully anticipated the price rise, an expansion in the quantity of money led to increases in nominal income while the real level of output remained unchanged. Friedman assumed that individuals did not instantaneously adjust their anticipations regarding price changes; rather they adjusted their price anticipations over time in response to errors they made in previous periods. This view of the formation of anticipations became known as the adaptive expectations hypothesis. In consequence of this assumption regarding the formation of expectations, Friedman contended that, in the short run, a change in the quantity of money led to alterations in both nominal income and the real level of output; in the long run, a change in the quantity of money resulted solely in an alteration in nominal income (see Friedman 1969, 1970, 1971).

In his 1968 Presidential Address to the American Economics Association, Friedman drew on his theoretical distinction between anticipated and unanticipated price changes to develop the natural rate hypothesis (Friedman 1968a).¹⁷ He postulated that a natural rate of employment existed at a 'level that would be ground out by the Walrasian system of general equilibrium equations provided there is imbedded in them the actual structural characteristics of the labor and commodity markets' (Friedman 1968a, p. 102). Friedman believed any attempts to alter this level of employment with monetary policy would ultimately be frustrated. To prove this assertion, he postulated an increase in the rate of monetary growth. Individuals spend excess cash balances driving down interest rates and increasing spending on new

assets and current services. Assuming that product prices rise faster than factor prices, the level of real wages falls enabling producers to increase the level of employment to accommodate the increased level of aggregate demand. In time wage earners realized that their real wages had declined and previous errors in estimating the level of real wages caused them to readjust their anticipations about the future level of real wages. As a result, wage earners demanded higher nominal wages for the future. Because the current level of unemployment was below the natural rate, as employers bid for labor, real wages began to rise toward their initial level and unemployment returned to its natural level. Thus, the observed increase in employment was merely a short-run phenomenon; in the long run, any change in the rate of growth of money resolved into alterations in the level of nominal income, and employment returned to its natural level.

Both the theory of nominal income and the hypothesis of the natural rate of employment substantiated Friedman's advocacy for a money growth rule. For while the variations in the supply of money can induce short-run changes in the level of output and employment, in the long run, changes in the supply of money would lead to either inflation or deflation in the level of nominal income that ultimately destabilizes the economy. A money growth rule assured a steady increase in the quantity of money, which stabilized growth around the natural rates of employment and output determined by the real conditions of productivity, capital and population in the economy.

In his formalization of the Chicago oral tradition, Friedman moved away from Simons's transaction version of the quantity theory that had explained the Depression in reference to rigid prices that had stimulated a perverse flexibility in the velocity of circulation and that had assumed the Fed could not control the supply of money due to the current financial structure. In the place of Simons's interpretation, Friedman substituted a theory of the demand for money, which specified a functional relationship among those factors that determined the quantity of real balances demanded by the community, and a theory of nominal income, which incorporated flexible prices and a relatively fixed velocity of circulation to explain historical occurrences such as the Depression. Thus while Friedman severed another theoretical connection with one of his ideological mentors, this change did place the monetarist model in an analytic framework similar to that used by the Keynesian economists. Both models of the macro-economy focused on the level of aggregate demand as the determinant of the levels of output and employment, and

both presented money as one of many assets that individuals demand to store purchasing power. With a common framework, it became much easier to conduct the comparative empirical tests necessary for analytic progress in an era of positive economics.

Other analysts have pointed out the transformation that Friedman made in the 'Chicago oral tradition' when he formalized it as the monetarist model.¹⁸ His response to these arguments indicates that the tension between Friedman's ideological and theoretical influences continued to come into play in his thinking. For rather than acknowledge that the monetarist model was designed as a response to Keynesian economics, Friedman cited the commonalities he conceived as existing between the ideas of Simons and Keynes. He stated that both analysts emphasized the importance of business expectations and the desire for liquidity, and both advocated the use of fiscal policy due to the impotency of monetary policy. In fact Friedman claimed that Keynes's chief innovation in the *General Theory* was the role he assigned to the liquidity trap during periods of deep depression (Friedman 1967, p. 87; 1974, pp. 162–8). Likewise, he attributed Simons's recommendation to use the more discretionary rule of stabilizing the price level, rather than the quantity of money, to his lack of knowledge about contemporary monetary data (Friedman 1967, pp. 12–13).¹⁹ And later, when discussing the contribution of Lucas in extending Friedman's idea regarding the distinction between anticipated and unanticipated price changes, Friedman claimed that the work of Lucas

brings us back to Henry Simons . . . As Fischer noted, if anticipations are formed rationally, no fixed policy on the part of the monetary authorities will produce a divergence between the actual and the 'natural' rates of unemployment. Only continuously 'fooling' the public will do that. Is it not for the better, along with Simons, to get instead the co-operation of the public by announcing in advance a policy and sticking to it? Though Lucas and Sargent have stated the point formally far better than it has been stated earlier, this has always been, as I see it, an essential foundation of the preference by Simons and his followers, including myself, for a fixed and announced rule of monetary policy. (Friedman 1975, p. 177)

Johnson argued that Friedman appealed to a 'Chicago oral tradition' because he 'had to endow these scholars . . . with a wisdom vastly superior to what their opponents had credited them with' (Johnson 1971, p. 65). Johnson attributed these actions to Friedman's need to engender the ideas of Simons and Mints with more substance than they actually possessed in order to increase the 'academic respectability' of monetarism

(Johnson 1971, p. 65). He predicted that, as monetarism was accorded more respect in the academic community, Friedman's need to enhance the reputation of Simons and Mints would decrease. And in fact Johnson's predictions have proved true. Because by 1983, Friedman even acknowledged the interventionist elements of the 'Positive Program':

You have to recognize what the environment was like at the time. By comparison with almost everybody else [Simons] was very free market oriented. I've gone back and reread the *Positive Program* and been astounded at what I read. To think I thought at the time that it was strongly pro free market in its orientation! (Kitch 1983, p. 178)

CONCLUSION

During the years of the Keynesian consensus when the use of interventionist policies to stabilize the economy were the rule rather than the exception, Friedman succeeded in developing a new theoretical foundation on which to rest the neoclassical case for laissez-faire. In accomplishing this task, he rejected the theoretical tools and methodological techniques bequeathed to him by his ideological mentors Knight, Simons and Hayek. He replaced their tools and techniques with the methodology of positive economics, the expected utility hypothesis, and the monetarist model. By following his method of analysis, Friedman consistently emphasized that disagreement among economists about their models ultimately resolved into empirical disputes regarding the fit of the predictions of those models to real events. His theoretical and empirical research obviously was intended to help resolve these disputes. Unfortunately it was unable to do so. For while the empirical tests did not falsify his case for laissez-faire, neither did they convince the detractors of his model.

Given this unsettled state of affairs, Friedman's observation that a scholar's values can influence scientific judgments returned to haunt him:

A scholar's basic values undoubtedly affect the way he resolves the inevitable uncertainties in his scientific judgments when he comes to recommend policies – and it is proper that they should. A person like myself who regards freedom as the major objective in relations among individuals and who believes . . . that the preservation of freedom requires limiting narrowly the role of government and placing primary reliance on private property, free

markets, and voluntary arrangements – such a person will resolve his doubts about the precise effects of any measure in favor of policies relying on the market. By contrast, a person who regards welfare or security as the major objective in social relations and who believes . . . that this objective can be best attained by governmental measures controlling and regulating private activity – such a person will resolve his doubts in favor of policies relying on government. (Friedman 1968b, p. 7)

Regarding macroeconomic activity, Friedman's primary policy recommendation was the institution of a money growth rate rule. Yet Friedman explicitly acknowledged that this policy recommendation was not based on the findings of economic theory but rather on his claim that economic analysis was not sophisticated enough to guide discretionary management of the economy. Further he stated:

Certainly the monetary policy I have come to favor – a steady rate of growth in the quantity of money – is highly congenial to my preferences for limited government and, where government is essential, for limiting government so far as possible by clearly specified rules rather than granting wide discretion to government officials. (Friedman 1968b, p. 9)

Thus, in evaluating whether the new case for *laissez-faire* which Friedman substituted for the one he had inherited from Knight, Simons and Hayek was the result of ideology or theoretical development, it becomes apparent that Friedman's personal commitment to competitive capitalism and its organizing principle of *laissez-faire* had some influence on his theoretical work. It is ironic that Friedman, who so earnestly hoped to purge positive economics of any normative and ethical content, in effect even opened a door for ideological influence. For by setting policy discussions on a methodological foundation that forced choice among competing theories using scientific judgments that could be influenced by a scholar's values, those values had the potential to influence policy recommendations.

NOTES

1. See Crauford Goodwin (1998) for a discussion about the new patrons of economists.
2. See Balisciano (1998) for a discussion about American notions of economic planning during this transformation.
3. See William J. Barber (1996) for an analysis of the changing role of the American government in the economy in response to the Depression and how economists reconceptualized the nature of their discipline in response.

4. Early explanations of the development of econometrics centered on the complementary demand for empirical measurement required for social planning (see for example Schumpeter 1954, p. 962). A more recent interpretation suggested that the rise of econometrics represented the response of economists to physicists' incorporation of stochastic concepts into their models and theories (Mirowski 1989a and 1989b).
5. The following biographical information except where cited is summarized from Friedman and Friedman (1998).
6. This research became the foundation of Friedman's doctoral dissertation (Friedman and Kuznets 1945). His controversial findings suggesting that the American Medical Association (AMA) engaged in monopolistic practices to limit entry into the profession nearly prevented him from receiving his degree. At that time all dissertations had to be published to earn the PhD. Due to the demands of the AMA Friedman was forced to qualify his remarks in order that his findings could be published by the NBER. He was particularly grateful to Mitchell for supporting him through the controversy.
7. For example, Keynesian economist Paul Samuelson had followed Hutchison's counsel by developing the method of operationalism. In essence, the use of operationalism entailed that economists develop 'operationally meaningful theorems . . . about empirical data which could conceivable be refuted if only under ideal conditions' (Samuelson 1947, p. 4).
8. While instrumentalism has had various meanings in economic analysis, more recent investigators of economic methodology have classified instrumentalists as those individuals who contend that theories are instruments that function to facilitate predictions about the consequences of change in conditions. See Larry Bolland (1979) and Caldwell (1982) for extended discussions of Friedman's instrumentalism.
9. See Abraham Hirsch and Eva Hirsch (1976) for a discussion of the distinct break between the methodological practice of Knight and Friedman.
10. Friedman has claimed that he developed his basic ideas about methodology independently from Karl Popper who had argued that a statement became scientific once it had the potential for falsification. He did meet Popper at the 1947 meeting of the Mont Pelerin Society, and he stated that conversations with Popper at that time 'had a great deal of influence on the final version of the essay', because Popper's views were 'far more sophisticated and more fully developed' (Friedman and Friedman 1998, p. 215).
11. In the 1920s the logical positivists had argued that scientific knowledge could only be gained by the use of a verifiability principle that required all knowledge claims be verified with empirical testing. The emphasis on observational verifiability led to as many problems for natural scientists, who could not observe atoms or protons, as it did for economists, who could not observe rational economic agents. To some logical positivists, including Otto Neurath and Rudolph Carnap, this commonality placed both the natural and social sciences on the same methodological footing and became the basis for their assertion regarding the unity of science (see Caldwell 1982, pp. 13–17).
12. This article has generated much secondary literature, with recent examples including Hirsch and Neil de Marchi (1990) and J. Daniel Hammond (1996).
13. Von Neumann and Morgenstern revived the earlier hypothesis of Bernoulli to model risk on the basis of the maximization of expected utility in *Theory of Games and Economic Behavior* (1944).
14. The 1942 paper discussing the inflationary gap analysis is particularly interesting regarding the evolution of Friedman's thinking. When it was first published in 1942, Friedman, like his contemporaries, ignored monetary effects when explaining the closing of the inflationary gap and postulated a chain of causation that sounded distinctly Keynesian. Frictions and lags led to a redistribution of income, which ultimately led to

changed savings and consumption plans that closed the inflationary gap (Friedman 1953b, p. 253). In the 1953 revision he appealed to the 'prevailing Keynesian temper of the times' to explain his earlier omission of monetary factors (Friedman 1953b, p. 253n). Yet Friedman could have appealed just as easily to the fact that in 1942, he was still under the sway of Simons's transaction version of the quantity theory that also focused on the presence of frictions to explain the Depression. Friedman's comments explaining the changes he made in the 1942 article illustrate once again the tension between ideological and theoretical influences on his thinking, which led him to represent selectively the earlier contributions of individuals like Simons in a fashion that would present his theoretical research as an outgrowth of their research.

15. Friedman borrowed the notion of real balances from the earlier work of A.C. Pigou and Don Patinkin, one of Friedman's first graduate students at the University of Chicago. During the 1940s, Pigou published two papers demonstrating that incorporation of the real balance effect in macroeconomic models could assure automatic equilibrium at full employment (Pigou 1943, 1947). Patinkin later undertook a study of the policy implications of the real balance effect. In the paper he cited Friedman as an active participant in the development of his ideas (Patinkin 1948).
16. A decade later Peter Temin criticized Friedman and Schwartz for their specification of the test equation, because they assumed 'that the stock of money was determined by supply factors alone' (Temin 1976, p. 18). With that assumption they ignored the effect of factors such as interest rates and income, which traditionally were assumed to determine the demand for money. Temin maintained that 'an account of the supply alone cannot tell us how much of the variation in quantity came from changes in supply conditions and how much from demand conditions' (Temin 1976, p. 22). Thus by assuming that the stock of money was determined by forces independent of the level of income, Temin contended that Friedman and Schwartz 'could infer that the stock of money then determined the level of income' (Temin 1976, p. 22).
17. Friedman presented these ideas in an earlier article (Friedman 1966). Phelps independently developed another version of the natural rate hypothesis in 1967.
18. See, for example, Patinkin (1969 and 1973b), Johnson (1971) and David Laidler (1993).
19. Such ignorance does not square with the fact that in 1935 Simons approvingly reviewed Lauchlin Currie's *The Supply and Control of Money in the United States*, a book that included detailed data about monetary aggregates and policy during the early years of the Great Depression (Simons 1935). Laidler (1993) independently pointed out the lack of validity of Friedman's claim about Simons's ignorance about monetary data.

6. James Buchanan and public choice theory

At approximately the same time as Friedman was developing the monetarist model as one of the theoretical underpinnings for the revival of laissez-faire, James McGill Buchanan (b. 1919) was fashioning a second theoretical case for a rules-based macroeconomic policy. This case grew out of the work for which he received the Nobel Prize in Economics in 1986: 'his contributions to the theory of political decision-making and public economics', also known as public choice theory. Due to the timing of his work, Buchanan's research offered a second theoretical foundation for laissez-faire as the Keynesian orthodoxy began to break down in the 1970s.

Over his career, an assortment of events has brought Buchanan into contact with the laissez-faire pioneers. He began doctoral studies at the University of Chicago in 1946, studying with both Knight and Friedman during the two years he spent there, and they 'are men with whom, broadly and generally, I agree on principles of political-philosophical order' (Buchanan 1964, p. 215). However, unlike Friedman, Buchanan chose to build his analysis on some of the ideas he had learned from Knight, in particular his notion of indeterminate uncertainty. In the course of developing his sub-discipline of expertise, public finance, Buchanan also read and was influenced by the work Simons did on personal income taxation. As an early member and the 1984–85 president of the Mont Pelerin Society, Buchanan also shared an allegiance to liberalism and laissez-faire with Hayek. Some of the elder's ideas found their way into Buchanan's work, in particular his views on methodology. And in the late 1950s Buchanan brought both Knight and Hayek as Distinguished Visiting Scholars to the newly founded Thomas Jefferson Center for Studies in Political Economy at the University of Virginia.

PRE-ANALYTIC FOUNDATIONS

In the years since receiving the Nobel Prize, Buchanan has described the formative influences on his economics. In interpreting his role in the revival of laissez-faire, three factors of particular importance emerged from these descriptions. First, he came to his study of economics committed to a particular set of values: libertarianism and antistatism. Second, he brought a particular view of the role of the economist to his work, one greatly influenced by his relationship with Knight. Third, as a Chicago graduate student, he was profoundly influenced by Knut Wicksell's ideas about collective decision-making.

Buchanan was born in Middle Tennessee in 1919, the son of a poor farmer who nonetheless possessed a small measure of regional prestige. His grandfather John P. Buchanan had served as Governor of Tennessee from 1891–93 as the representative of the populist Farmer's Alliance Party. As a youngster, Buchanan's family expected him to follow in his grandfather's footsteps as a lawyer-politician after a period of study at Vanderbilt University. The Great Depression made that dream financially impossible, so Buchanan enrolled as a day student at Middle Tennessee State Teachers College in 1936, where he majored in 'mathematics, English literature and social science including economics' (Buchanan 1986b, p. 3). He spent the 1940–41 academic year earning a master's degree at the University of Tennessee and then was drafted to participate in World War II in August 1941. He went to officer training school in New York City; his success, ranking seventh in a class of hundreds, insured that he experienced 'an easy war' as an Operations Officer on Admiral Nimitz's staff in the Pacific (Buchanan 1992b, p. 48). At the end of the war, Buchanan debated between a career in the navy and studying economics. He decided to use the G.I. Bill to fund further graduate education. He chose the University of Chicago, not because he knew 'about the competence or ideological makeup' of members of the economics department, but because a favorite undergraduate professor, C.C. Sims, who had 'a Chicago Ph.D. in Political Science, conveyed to me the intellectual excitement of the place' (Buchanan 1986b, p. 4).

Values

Buchanan came to Chicago in 1946 'as a libertarian socialist . . . anti-state, antigovernment, antiestablishment' (Buchanan 1986b, p. 5). He

conceived of himself as a libertarian 'in my conviction that politicized restriction on individual liberties should be minimized' (Buchanan and Musgrave 1998, p. 16). He traced his antistate and antigovernment feelings to his rural Southern origins: the Civil War 'cannot be overlooked as a formative experience. In a genuine sense I grew up a member of a defeated people', and any expression of loyalty to a central government 'would have been near-treachery' in his environs (Buchanan and Musgrave 1998, p. 15). He described two sources of his antiestablishment views: 1890s populism and officer training during World War II. As a young boy, he had read the numerous populist pamphlets stacked in his attic, which alleged that the 'Eastern establishment, the robber barons and financial tycoons . . . control[led] national polities' (Buchanan and Musgrave 1998, p. 15). 'Officer training school in New York radicalized [him]' further due to the discrimination against individuals who had not attended 'the eastern establishment universities'; 'this on-hand experience with blatant discrimination, no matter how rational, against southerners, mid-westerners, and westerners served to reinforce in concrete my populist pre-conceptions' (Buchanan 1986b, p. 4; 1992b, p. 49). His allegiance to socialism stemmed from his 'judgment that only political action could break up and control the power concentrations that directed economic life' (Buchanan and Musgrave 1998, p. 16).

When Buchanan arrived at Chicago he found other libertarian socialists among the ranks of his fellow graduate students. Buchanan described a person of this political persuasion as an individual who 'places primary value on *liberty*, as such. [He] personally disputes, rejects, resists, opposes attempts by others to exercise control or power over his own choice behavior' (Buchanan 1986a, p. 4). At the same time this individual 'remains blissfully ignorant of economic theory and, notably, of its central principle of spontaneous coordination' (Buchanan 1986a, p. 4). Due to his ignorance of economics, he was opposed to the market because of the 'anger, rage or loathing at the arbitrary powers that others seem to exercise over him' (Buchanan 1986a, p. 5).

But after a mere six weeks in Knight's price theory course, Buchanan was 'converted into a zealous advocate of the market order' (Buchanan 1986b, p. 5). His conversion was not due to any personal effort on Knight's part, but rather he was 'converted by the power of ideas' (Buchanan 1986b, p. 5). In essence, Knight taught him that 'choices in the market are not arbitrary, that there are narrow limits on the potential for exploitation of man by man, that markets tend to maximize freedom

of persons from political control, that liberty . . . is best preserved in a regime that allows markets a major role' (Buchanan 1986b, p. 5).

Thus, after his exposure to Knight's presentation of economic theory, Buchanan came to couple his libertarian and antistate values with a 'strong advocacy of the market organization of the economy' as a means to preserve those ideals (Buchanan 1986a, p. 3).

The Role of the Economist

When Buchanan chose economics as his life work, he, unlike Simons or Friedman, did not intend to solve problems or become an economic reformer. In fact, he believed that motivation was unrealistic for an individual in his circumstances: 'For one thing, a student from Middle Tennessee in the late 1930s was unlikely to dream that he might attain a position of authority, either directly or at some stages removed' (Buchanan 1992b, p. 39). Instead he looked to Knight, the teacher who took an interest in him due to 'common threads of experience', upbringings in rural poverty, educational training in Tennessee and appreciation of the poetry of Thomas Hardy, as his role model of what an economist should do (Buchanan 1990, p. 77). From Knight, he learned and tried to emulate the role of dispassionate intellectual. To maintain dispassion, Knight taught him that his task was to participate in the conversation of free discussion about ideas, not in public policy advocacy: 'I have always thought it to be my task to develop and create ideas and to enter those ideas into the discussion matrix. Once this step is taken, my task is done. I have felt, and feel, no moral obligation to promulgate my own ideas, or those of others' (Buchanan 1992a, p. 149).

To promote that discussion, Buchanan has published extensively in scholarly journals, has founded and directed several academic centers for the study of public choice theory, and has begun the scholarly journal *Public Choice*.¹ Thus, in contrast with Friedman, he has never taken on a prominent role in popular policy debates. To become an intellectual, Knight taught him a willingness to question authority:

The qualities of mind that Knight exhibited were, and remain, those that I seek to emulate: the willingness to question anything, and anybody, on any subject anytime, the categorical refusal to accept anything as sacred; the genuine openness to all ideas; and, finally, the basic conviction that most ideas peddled about are nonsense or worse when examined critically. (Buchanan 1986b, p. 5)

At the same time, Knight did not suggest these challenges should result in a philosophical stance of either absolute nihilism or relativism. Rather, Knight taught Buchanan that

the principle of the relatively absolute absolute requires that we adhere to and accept the standards of established or conventional authority in our ordinary behavior, whether this be personal, scientific, or political, while at the same time and at still another (and 'higher') level of consciousness we call all such standards into question, even to the extent of proposing change. (Buchanan 1990, p. 79)²

Aiming for both qualities reinforced Buchanan's feelings of being one outside the establishment, in this case, the power structure of American academic economics after World War II.

The Ideas of Knight and Wicksell

Even though more of Knight's ideas would appear in his later work, Buchanan believed he left his formal economic instruction by Knight with two fundamental concepts. First, he took Knight's emphasis on the process of economic activity. In the classroom, Knight taught economics as both an 'allocating-maximizing paradigm' and a 'coordination paradigm' (Buchanan 1990, p. 71). Buchanan believed that due to his poor prior instruction in economics, he did not place the importance on allocation, 'like so many of [his] peers, aside from the few who were exposed early to Austrian theory' (Buchanan 1990, p. 71). Instead, he 'was able to elevate the coordination principle to the central place it has occupied in [his] thinking throughout [his] research career' (Buchanan 1990, p. 71). The second important idea that he took from Knight complemented the emphasis on coordination. Coordination required some sort of institutional structure, and Knight taught about 'the structure of social and economic interaction', an emphasis Buchanan believed he shared with seminal institutionalists including 'Clarence Ayres, John R. Commons, Thorstein Veblen' (Buchanan 1990, p. 73).³

During the summer of 1948, having finished his degree requirements, Buchanan pulled Knut Wicksell's 1896 dissertation about taxes from the shelves of Harper Library (Wicksell 1896). Due to the language requirements for PhD degrees, Buchanan had a sufficient command of German to read the text, which remained untranslated into English at that time. To Buchanan's mind, Wicksell appeared to address the issues that bothered him about the public finance theory he had learned in graduate school,

and Knight unconsciously had prepared him to hear. Three ideas stood out in importance. First, Wicksell studied taxation in terms of the 'institutional structure through which collective decisions are made' (Buchanan and Musgrave 1998, p. 17). Second, he focused on changes in rules as the way to change 'patterns of outcomes predicted to emerge' (Buchanan and Musgrave 1998, p. 17). Finally, he challenged the assumption of the 'benevolent despot', implicitly or explicitly employed by orthodox public finance theorists (Buchanan and Musgrave 1998, p. 17).⁴ When Buchanan left Chicago in mid-1948, these ideas were 'embedded in his psyche' and eventually they would find their way into his work in public choice theory (Buchanan 1986b, p. 6).⁵

PREPARATIONS FOR PUBLIC CHOICE THEORY

Buchanan 'commenced [his] professional academic career as a straightforward public finance economist' (Buchanan 1992b, p. 83). His master's thesis consisted of an empirical study of gasoline tax sharing among local units of government in Tennessee (Buchanan 1941). His doctoral dissertation explored the topic of 'Fiscal Equity in a Federal State' (Buchanan 1948). He studied the methodology of existing public finance theory (Buchanan 1949, 1954b, 1955, 1958a, 1958b, 1959). He investigated methods of financing the national highway system (Buchanan 1956). He participated in debates surrounding the implications of Arrow's Impossibility Theorem for the future of welfare economics (Buchanan 1954a). During the 1955–56 academic year, he received a Fulbright Fellowship to study in Italy and spent his time there reading the Italian public finance literature.

All of this served to prepare Buchanan for developing his interpretation of public finance theory, the theory of public choice. In it he highlighted three qualities that he deemed essential to the development of an acceptable theory of public finance. First, public finance theory must be based on a unified, individualistic view of the polity. Second, public finance theory must rely on the subjectivist economics. Finally, public finance theory must become a type of positive economics that was impartial with respect to ideological and normative content.

An Individualistic Theory

In an early paper, 'The Pure Theory of Government Finance: A Suggested Approach', Buchanan reviewed orthodox public finance

theory. He observed that the analyses of public expenditures and tax incidence were 'erected on two political foundations, which represent, in turn, two separate and opposing theories of the state' (Buchanan 1949, p. 8). Traditionally public finance theorists who analyzed public expenditures relied on a theoretical framework that embodied an organic view of the state. As such, the state was presented as a 'single decision-making unit acting for society as a whole' (Buchanan 1949, p. 9). In this framework, the decision problem of the expenditure analyst became to choose an array of expenditures that 'seeks to maximize some conceptually quantifiable maximum', typically referred to in vague terms such as social utility or general welfare (Buchanan 1949, p. 9). In contrast, conventional public finance theorists who analyzed the incidence of tax payments used a theoretical apparatus that embodied an individualistic conception of the state. In this view of the state, the individual represented the basic decision-making unit in society, implying that 'the state has its origin in, and depends for continuance upon the desires of individuals to fulfill a certain portion of their wants collectively' (Buchanan 1949, pp. 11–12). In the individualistic framework, the decision problem of the tax analyst became to determine an optimal allocation of 'relative tax pressures imposed on individuals' (Buchanan 1949, p. 9).

Buchanan contended that the customary practice of public finance theorists to base their examination of public expenditures on an organic view of the state and their investigation of taxes on an individualistic view of the polity resulted in a situation in which expenditures and revenues were 'analyzed in isolation'; and consequently, 'the interdependence of the two sides of the fiscal process . . . [were not] clearly understood' (Buchanan 1949, p. 22).

To remedy this inconsistency, Buchanan proposed using an individualistic framework for analyzing both expenditures and taxes. A decade later he provided his reasoning for this approach. First, this recommendation was based on the belief that 'the "individualistic" assumptions [seemed] to be the only appropriate ones for democratically-organized societies' (Buchanan 1960, p. 4). Because 'the one-man-one-vote ideal of democratic choice-making implies universal participation in [collective] decisions', Buchanan deemed it inappropriate to use an organic framework in which 'the collective decisions are exogenous to the private economic calculus of individual families' (Buchanan 1960, pp. 6–7). Second, when using an individualistic framework, the analyst implicitly assumed that 'separate individuals are separate individuals, and, as such, are likely to have different aims and purposes for the

results of collective action'; hence a consistently individualistic framework provided a mechanism 'to explain or to describe the means through which conflicting interests are reconciled' (Buchanan and Tullock 1962, p. 4).

A Subjective Theory of Public Finance

Having decided to recast public finance theory in a consistently individualistic framework, Buchanan next compared the character of the choices individuals made in organized markets and in organized political processes. With respect to the evolution of *laissez-faire*, the significant finding of this comparison consisted of Buchanan's isolation of the presence of Knightian uncertainty in the voting process. Knightian uncertainty was manifest in two ways. First unlike market choice, where

The individual . . . can predict with absolute certainty the direct or immediate result of his action . . . the voter, even if he is omniscient in his foresight of the consequence of each possible collective decision, can never predict with certainty, which of the alternatives presented will be chosen. He can never predict the behavior of other voters in the polling place. Reciprocal behavior prediction of this sort becomes a logical impossibility if individual choice is accepted as meaningful. (Buchanan 1954b, p. 92)

Buchanan characterized this 'inherent uncertainty confronting the voter . . . as genuine uncertainty in the Knightian sense; it is not subject to the application of the probability calculus' (Buchanan 1954b, p. 92).⁶ Second, when comparing the degree of coercion implicit in market and in voting choice, Buchanan argued that the forward-looking nature of voter choice became evident. In the market, 'when a commodity or service is exchanged . . . the individual chooses from among *existing* alternatives' (Buchanan 1954b, p. 98). 'In voting, the individual does not choose among *existing* but rather among *potential* alternatives . . . [As a result] he may be compelled to accept a result contrary to his expressed preferences' (Buchanan 1954b, pp. 98–9). Therefore at the moment of casting a vote, the individual was uncertain whether he would have to accept an outcome that did not reflect his preferences.

When Buchanan recognized that uncertain potential outcomes were the influential factor in guiding collective choice, it became apparent that objective modes of analysis emerged as virtually useless. Rather he contended that the analyst needed to turn to subjectivist economics, which studied the perceptions of the individual and those factors which

influenced those perceptions when the decision between private and public provision of a particular good or service was made. In a later doctrinal history of the theory of opportunity cost and choice, Buchanan aligned this methodological approach with the London School of Economics (LSE) tradition:

Latter-day Austrians may suggest with some justification that the theory developed is properly labeled 'Austrian.' Beyond question, an important source of the London conception is Austrian. But as I read the early Austrians along with the London contributions, I remain convinced that uniquely characteristic features were added and that the whole construction reached operational viability only in London. (Buchanan 1969, p. ix)

According to Buchanan, Hayek introduced subjectivist economics to LSE in his 1937 paper 'Economics and Knowledge', a paper in which Hayek also gave credit to Mises. The paper made clear the distinction between a subjectivist 'theory of cost that is related directly to choice' in voting, as opposed to an objective theory of cost used by orthodox welfare economists (Buchanan 1969, p. 24). To Buchanan, what Hayek demonstrated in that paper was: 'Equilibrium is described not in terms of objectively-determined "conditions" or relationships among specific magnitudes, *e.g.*, prices and costs, but in terms of the realization of mutually-reinforcing and consistent expectations' (Buchanan 1969, p. 25).

Positive Economics to Positive Political Economy

As the discipline moved increasingly to the adoption of positivistic methods under the leadership of Friedman among others, Buchanan apparently felt compelled to address the role positive economics would play in his reinterpretation of public finance theory. He did so in his 1959 paper 'Positive Economics, Welfare Economics, and Political Economy'. In the process, he laid the groundwork for the emphasis on rules that ultimately made its way into public choice theory. At the same time, he implicitly challenged Hayek's explicit rejection on epistemological grounds of the idea that it was possible to develop subjectivist economics in a positivistic framework. Thus, a description of Buchanan's conception of positive political economy is important to discover whether his understanding of this method saved him from an apparent inconsistency in combining subjectivist economics with positive economics.

Buchanan aligned his understanding of positive economics with his teacher Friedman, who he believed had provided 'the clearest statement of the positivist position' (Buchanan 1959, p. 105). In essence, Buchanan conceived of the task of the positive economist 'as an inventor of testable hypotheses' (Buchanan 1959, p. 105). In that undertaking, the economist was supposed to make 'a distinct separation between scientific and nonscientific behavior' (Buchanan 1959, p. 105). Buchanan was concerned that in that capacity the positive economist could only participate in policy formation in a 'wholly indirect' manner, and he did not believe that the economist would be content with this indirect role in policy formation, because 'the incremental additions to the state of knowledge which "positive" economics may make seem to shut off too large an area of discussion from his professional competence' (Buchanan 1959, pp. 105–6). An illustrative case of this problem was the theoretical construct of the social welfare function. Buchanan believed maximization of a social welfare function as the criterion for a choice among policy proposals allowed the personal values of the professional economist to enter their scientific work, because, in essence, 'the function orders all possible social situations and allows an external observer to select one as "best" ' (Buchanan 1959, p. 117). And he criticized this approach because he believed: 'the central feature of the approach seems, therefore, to be contrary to the presuppositions of a free society. The function may be useful as a device in assisting the decision making of a despot', whose benevolence was something that he, with his antistate values, believed impossible (Buchanan 1959, p. 119).⁷

Rather than rejecting positive economics, Buchanan believed the way forward was the development of a positive political economy that recognized the insights of subjectivist economics. He started from the basic postulate that utility was 'a *subjectively* quantifiable magnitude' (Buchanan 1959, p. 108). As such when analyzing the choice process all the economist could do was 'to make certain presumptions about "utility" on the basis of observed facts about behavior [realizing that] he must remain fundamentally ignorant concerning the actual ranking of alternatives until and unless that ranking is revealed by overt action of the individual in choosing' (Buchanan 1959, p. 108).

When analyzing choices in market behavior, the analyst could assume that the ends guiding that ranking were given to the individual, that is the individual set out to maximize 'the payoff or outcome from the use of limited resources' (Buchanan 1959, p. 108). When analyzing choices in voting, he was unable to make the same assumption, because, like Knight,

Buchanan believed that individuals created social ends in the process of making collective choices rather than determining them beforehand. Thus any time the analyst applied the maximization criterion to evaluate a potential choice in voting, it was 'in terms of his own estimate of the value scale of individuals other than himself (Buchanan 1959, p. 108).

Although the analyst could only estimate the value scales of individuals other than himself, Buchanan believed that he could remain 'ethically neutral' in his work (Buchanan 1959, p. 109). For in evaluating any proposal for policy change, the analyst judged its efficiency on the basis of his estimate of individual preferences 'as *he thinks they exist* . . . not as he thinks they should be' (Buchanan 1959, p. 109). Upon analysis, if the public choice theorist believed that a policy offered a change that he evaluated as potentially Pareto-optimal, he could present this proposal as a hypothesis to members of the society at large. In presenting this proposal, Buchanan again believed that the analyst could remain 'wholly indifferent as a member of society' to the changes that could be induced (Buchanan 1959, p. 110). If the members of society agreed via their choices in voting to undertake the proposed policy action, then in effect, they have accepted the hypothesis that the new policy offered by the analyst would remedy a particular social problem. Thus, Buchanan believed political economy could become positivistic in the sense that it 'allow[ed] the expert to make certain predictions about the real world'; in turn these hypotheses were supported or refuted 'in the observable behavior of individuals *in their capacities as collective decision makers*, in other words, in politics' (Buchanan 1959, p. 110).

Buchanan added a qualification to his application of positive economics to political economy, and it was via this stipulation that he brought in his justification for rules-based policies. Analysts could not use positive political economy as a means to invent testable hypotheses to study the enforcement of existing laws. Rather he confined the scope of the positive political economy 'to only one form of social change, namely that which is deliberately chosen by members of the social group in their collective capacity' (Buchanan 1959, pp. 115–16). In a 1987 reprinting of this article, he explained this restriction by referring to Knight's game metaphor, an idea with which he had become re-acquainted through the work of Rutledge Vining, his Virginia colleague and fellow Knight student:

Political economy is concerned exclusively with the modifications of the rules of the game, and this branch of the discipline has no place in the discussion of

strategic action taken by either side in the game itself. The compensation requirement suggests only that all players agree on the rules before continuing the game. Changes made within existing law are analogous to the enforcement of agreed-upon rules, and changes arising from the strategic contest itself are fully analogous to the changes taking place by the shift of the exogenous variables of the economic order. (Buchanan 1987b, pp. 18–19)

Buchanan's combination of subjectivist and positive economics had several consequences. First it severely restricted the scope of analysis to inventing testable hypotheses about changes in the legal framework. Second, in moving the site of empirical tests from the analysis of extensive collections of economic data to the polling place, Buchanan so severely circumscribed the scope of acceptance or refutation of hypotheses that testing became almost meaningless. Third, several avenues for the normative values of the economist to enter analysis still remained. Buchanan acknowledged himself that one avenue occurred when the vote-test was not unanimous, and the analyst had to use judgment to determine if the hypothesis was refuted. In addition, by converting the political economist's task to that of 'locating possible flaws in the existing social structure and in presenting possible "improvements" ', the economist still had to judge which flaws required investigation (Buchanan 1959, p. 122).

In the following pages as the research of his case for laissez-faire is set forth, it becomes evident that Buchanan himself focused primarily on one aspect of positive economics: the development of testable hypotheses. In effect, he avoided addressing the inconsistency implicit in his project to develop a subjectivist economics that was also positive by neglecting the empirical research that was an essential component of positive economics. By the late 1980s Buchanan acknowledged just that fact:

Indeed, to the Chicago-based group of scholars . . . empirical work is the be-all and the end-all of the discipline. Those of us in the Virginia tradition are more catholic in our methodology; we acknowledge the contributions of empiricists while attributing importance to the continuing search for new theoretical insights. (Buchanan 1988, p. 9)

Public Finance to Public Choice

During the 1959–60 academic year, Buchanan joined forces with Gordon Tullock to write one of the seminal books in public choice theory, *The Calculus of Consent: Logical Foundations of Constitutional*

Democracy (1962). In essence, the research agenda they established for themselves was 'to analyze the calculus of the rational individual when he is faced with questions of constitutional choice' (Buchanan and Tullock 1962, p. vi). They termed this approach methodological individualism, defining it as a situation in which 'human beings are conceived as the only ultimate choice-makers in determining group as well as private action' (Buchanan and Tullock 1962, p. vi). At the end of their analysis, they 'were able to show that, even under such an extreme behavioral assumption, something closely akin to constitutional democracy as we know it would tend to emerge from rational individual calculus' (Buchanan and Tullock 1962, p. 305).

Not surprisingly, the model of collective choice they constructed began the work of addressing Buchanan's critiques of the existing theory of public finance. First, with this approach, Buchanan found a means to make public finance theory consistently individualistic. He credited his co-author with pushing him even further in this regard, because they incorporated Tullock's recommendation to use the *homo economicus* model of individual maximization to study political and bureaucratic behavior. Second, they began to incorporate elements of subjectivist economics in their descriptions of the decision-making costs associated with collective choice. Finally, their model incorporated some of the elements Buchanan had described as part of positive political economy. The focus on constitutional choice insured that they restricted the scope of analysis in accordance with Buchanan's method for creating a positive political economy, because they defined a constitution as 'a set of rules that is agreed upon in advance and within which subsequent action will be conducted' (Buchanan and Tullock 1962, p. vii). Further, they intended that their extension of the *homo economicus* model to collective choice would suggest 'conceivable observations that would refute the fundamental hypotheses' (Buchanan and Tullock 1962, p. 299). One test that they suggested consisted of the observation of 'single groups deciding unilaterally to give up special privilege legislation', and they ended their book calling for that empirical work (Buchanan and Tullock 1962, p. 300). Much of this work was ultimately undertaken by 'a set of successive graduate classes with genuinely outstanding students . . . We could almost literally say to a student, "Pick any politically organized activity, and proceed to analyze its origins, its support, its operation, with the tools of public choice"' (Buchanan 1992b, p. 100).

Buchanan extended further the subjectivist aspects of public choice theory in *Public Finance in Democratic Processes*, which analyzed the

perceptions of the individual as they affected choices in voting (Buchanan 1967b). This focus required an investigation of any factors that influenced perceptions, as the individual considered whether he should turn to the private or the public sector for the provision of particular goods and services. Buchanan contended that the existent 'institutions through which the costs and benefits of collective action are presented' become the crucial factor influencing individual perceptions (Buchanan 1967b, p. 7). When an individual purchased a good in the market, a one-to-one correspondence between the cost and the benefit of that good existed in the mind of the purchaser. Consequently, the institution devised for the payment of that good was irrelevant. On the other hand, when an individual purchased a public good, he acquired not one good or service but a bundle of goods and services, making it nearly impossible for him to impute the relevant costs and benefits of each item. Further, he was required to accept a particular institution of payment for this bundle of goods and services.

Both the indivisibility of public goods and the predetermined institutions of payment ultimately influenced the perceptions of the individual when he made choices concerning collective action. First, because it was costly to obtain information regarding the predicted costs and benefits of alternative bundles of goods and services, individuals make collective choices based on less-than-perfect information. Consequently the rational individual determined an '“optimal” amount of investment in fact-finding and analysis' (Buchanan 1967b, p. 8). In determining the optimal amount of investment, the individual took into account the existent institution of payment because under some institutions an individual would 'accept a greater degree of ignorance than he does under another set' (Buchanan 1967b, p. 8). Second, because different sets of institutions altered the tax-share liability and the tax-price the individual expected to pay for his bundle of goods and services, the existent fiscal structure affected the individual's decisions for or against collective action by influencing his perception of how much he ultimately would pay for public provision (Buchanan 1967b, pp. 15–16). Third, due to the indivisibility of the benefits and costs of public goods, different sets of institutions affected the individual's perceptions when he decided whether it was even worth his while to participate in the process of public choice (Buchanan 1967b, pp. 124–5). Finally, fiscal institutions affected perceptions due to 'their predicted ability to foster illusion or false beliefs' (Buchanan 1967b, p. 8). Illusion arose because a particular institutional arrangement caused an individual to perceive the characteristics

of alternative bundles of goods falsely. As such, institutions could lead individuals to make public choices that do not accurately reflect the costs and benefits of the public provision of goods and services (Buchanan 1967b, pp. 126–7). Since fiscal institutions influenced the perceptions of the individual as he made public choices, Buchanan maintained that they became endogenous variables in any model of the economy examining the outcomes of public choice. As a result, the absolute size of the public sector became responsive to the fiscal institutions adopted by individuals in society.

CASE FOR LAISSEZ-FAIRE

By the mid-1960s, Buchanan had identified the flaw in the existing framework of rules that required investigation. As he has described, ‘“my world” was radically shifted in the 1960s’, due to a series of external events (Buchanan 1992b, p. 112). As one with strong antistate sentiments, a continuing part of his concern related to the expanded role of the government in the economy. He attributed part of this trend to the growth of the military: ‘so long as the Cold War continues, the proportion of national output utilized by government seems unlikely to be reduced sizably’ (Buchanan 1960, p. 3). Similarly he stated:

when the governmental machinery directly uses almost one-third of the national product, when special interest groups clearly recognize the ‘profits’ to be made through political action, and when a substantial proportion of all legislation exerts measurable differential effects on the separate groups of the population, an economic theory can be of great help in pointing toward some means through which these conflicting interests may ultimately be reconciled. (Buchanan and Tullock 1962, p. 22)

In 1960, his antiestablishment sentiments were affronted by ‘a rich man’s purchase of the presidency for his son’ (Buchanan 1992b, p. 113). A few years later, he was alarmed when the free discussion he so prized began to break down. In the academy, he experienced this breakdown as both a participant and an observer. In Charlottesville, ‘those who made decisions for the corporate actor that was the University of Virginia’ criticized Buchanan and his colleagues at the Thomas Jefferson Center for their ‘alleged “Fascist” and “right-wing” zealotry’ (Buchanan 1992b, p. 113). And across the country, at institutions of higher education, such as at UCLA where Buchanan fled in disgust after events at the University

of Virginia, administrators were bowing to the pressure of antiwar protestors. His alarm about the civil unrest was also heightened by assassinations of national leaders, the civil rights movement and the growing drug culture. Ultimately these events galvanized Buchanan to write what he characterized as his first venture into political philosophy – *The Limits of Liberty: Between Anarchy and Leviathan* (Buchanan 1975).

In *The Limits of Liberty*, Buchanan modeled the government as a Hobbesian leviathan whose political agents sought to maximize revenue collections. An application of this model became the basis of his macroeconomic case for laissez-faire. He presented the case in *Democracy in Deficit*, jointly authored with Richard Wagner (Buchanan and Wagner 1977). They started the analysis with the following hypothesis:

The whole of the Keynesian and post-Keynesian theory of macroeconomic management (including monetarism) depends critically on the presumption that political agents respond to considerations of ‘public interest’ rather than to the incentives imposed on them by constituents. Once these agents are modeled as ordinary persons, the whole policy structure crumbles. (Buchanan 1986b, p. 11)

To establish the acceptability of this hypothesis, Buchanan and Wagner attempted to demonstrate that the Keynesian fiscal institution led both the politician and the individual taxpayer during their mutual exchange of public services and votes to select policy actions that created deficits, inflation and an enlarged public sector. If the hypothesis was accepted as valid, they believe that it implied that society needed to make modifications in the existing institutional structure.

In their investigations of the Keynesian fiscal institutions, Buchanan and Wagner assumed that both politicians and individual taxpayers directly participated in the formation of public policy. They separated their analysis into discussions of policy instruments and methods of finance. They based their discussion of policy instruments on the observation that ‘the juxtaposition of Keynesian policy prescriptions and political democracy creates an unstable mixture’ because both the politician and the individual voter applied policy measures asymmetrically (Buchanan and Wagner 1977, p. 73). In a Keynesian system, the prescribed federal policy consisted of maintaining full employment and stabilizing prices with the use of discretionary policy, irrespective of whether the federal budget was balanced or not. That objective required the government to incur deficits during a recession and surpluses during periods of inflation.

When analyzing the choice process of politicians in a public choice framework, it quickly became apparent that the politician's desire to maximize his potential for re-election or reappointment matched the Keynesian policy prescriptions only with respect to the creation of deficits. For a politician who voted for increased government spending or decreased taxes, measures necessary for the creation of a deficit, acted in harmony with the preferences of his constituents. In contrast, the politician who voted for decreased government spending and increased taxes was not perceived as acting in the best interest of his constituents. Consequently, the politician opted to vote for deficits more often than surpluses. Due to this asymmetrical application of counter-cyclical policy, the federal budget became prone to deficits and the economy to inflation (See Buchanan and Wagner 1977, p. 83).

As a side note, Buchanan and Wagner faulted the monetarists for adding stimulus to the creation of deficits. For during the post World War II periods of inflation, 'the creation of surpluses would have been recognized as politically different in kind from the creation of budget deficits . . . had it not been for the simultaneous "rediscovery" that money matters' (Buchanan and Wagner 1977, p. 83). The focus on money in macroeconomic theory turned attention to monetary policy and encouraged the perception that the Federal Reserve could control inflation. The result of the monetarists' refocusing of the debate to monetary issues was an increase in political pressures that encouraged easy budgets offset by tight monetary policy (Buchanan and Wagner 1977, p. 85).

Buchanan and Wagner maintained that a similar asymmetrical response between deficit and surplus creation became evident in the analysis of the choice process of the individual taxpayer. When voting for a surplus, the individual weighed the direct and immediate costs of tax increases or spending reductions against the benefits of the future prevention of inflation. Yet, 'the benefits side of surplus policy is never experienced, but rather it must be *creatively imagined*, taking the form of the hypothetical or imagined gains from avoiding what would be otherwise an inflationary history' (Buchanan and Wagner 1977, p. 100). When voting for a deficit during a recession, the individual weighed the immediate benefits of a tax reduction or an increase in government spending against the prospect of continued unemployment. Given those choices, the vote for a deficit automatically followed.

Buchanan and Wagner additionally emphasized that once the Keynesian fiscal institutions replaced earlier fiscal institutions that

demanded balanced budgets, there existed an incentive for the individual taxpayer to vote for deficits even if the economy was not experiencing a recession. For when voting for a deficit, the individual taxpayer sensed only his increase in personal gain due to either a reduction in tax rates or an increase in government spending. Therefore, whether the economy was experiencing unemployment or full employment, the individual taxpayer perceived he would gain by voting for deficits (see Buchanan and Wagner 1977, pp. 102–3).

Buchanan and Wagner additionally argued that the incentives inherent in the Keynesian policy instruments led individuals to create deficits, which in turn accounted for the bias toward expanded public provision of goods and services. To demonstrate this point, they assumed that the government started with a balanced budget and that a recession occurred. According to Keynesian prescriptions, the correct policy response consisted of increasing government spending, decreasing taxes or a combination of both. When these policies were implemented, the individual taxpayer perceived that the price of public goods had fallen relative to its former level, either because they received more public goods for the tax-price they had paid previously or because they paid a lower tax-price to receive the same amount of public goods they secured before the policy change. Therefore, the individual taxpayers increased their demand for public goods, biasing the allocation of goods and services toward provision in the public sector (see Buchanan and Wagner 1977, p. 104; and Buchanan 1967a).

Buchanan and Wagner acknowledged that critics could counter their argument regarding the ability of the Keynesian fiscal institutions to alter individual perceptions. For if it was assumed that the ‘errors in perception made by individuals are distributed symmetrically, or roughly so, around some idealized “true” assessment of alternatives’, then the errors of numerous individuals could cancel each other out, removing the underlying biases toward deficits, inflation and an expanded public sector (Buchanan and Wagner 1977, p. 129).

To confront this counter-argument, Buchanan and Wagner described the manner in which the Keynesian fiscal institutions systematically biased individual perceptions in a certain direction. In their investigation, they applied the notion of illusion, which Buchanan had introduced in his theory of fiscal institutions, to the consideration of methods of financing deficits: taxation, public debt and money creation. In the instance of tax institutions, illusion was caused by a ‘complex and indirect payment structure . . . that will systematically produce higher levels

of public outlay than those that would be observed under simple payment structures' (Buchanan and Wagner 1977, p. 130). This result occurred because tax structures that were characterized by either an indirectness of collection or a variety of sources weakened the price signals that connect the tax-payment price for goods and services with the receipt of goods and services.⁸ Due to the illusion created by complex tax institutions, the individual perceived falsely that public goods cost less than they actually did. In response to his faulty perception of the relative price change of private and public goods, the individual taxpayer demanded more public goods. A systematic bias toward the creation of an expanded public sector occurred in response (Buchanan and Wagner 1977, p. 130). In an economy organized with Keynesian fiscal institutions, no balanced budget constraint existed to prevent policymakers from meeting this expanded demand for increased public services; as a result expanded rates of spending occurred in the public sector.

When the individual taxpayer compared current taxation with debt as a method of financing deficits, Buchanan and Wagner maintained that there existed a behavioral incentive for the individual taxpayer to choose debt financing. This incentive occurred because existent fiscal institutions did not authorize public debt encumbrances to be transferred past the death of citizens. While younger members of society remained indifferent between taxes and debt as methods of finance, older citizens had an incentive to opt for debt creation (Buchanan and Wagner 1977, pp. 139–41).⁹ In an economy relying on Keynesian fiscal institutions, no balanced budget constraint existed to prevent policymakers from meeting this increased demand with expanded rates of spending.

In the instance of financing deficits by the creation of money, Buchanan and Wagner assumed that from a perceptual point of view inflation was not equivalent to a tax because 'no explicit political discussion and decision takes place on either the source or the rate of the tax to be imposed' (Buchanan and Wagner 1977, p. 142). As a result they believed that any signal that inflation might provide regarding the higher price of public provision of goods and services was overwhelmed by the noise of rising prices throughout the economy. This noise created an illusion whereby the individual taxpayer perceived rising prices as caused by the actions of the private sector rather than due to the monetary financing of deficits by the public sector. As a result the individual taxpayer increased his demand for public goods and services in response to his perception that the price of private goods has increased relative to

that of public goods (Buchanan and Wagner 1977, p. 143). In an economy organized with Keynesian fiscal institutions, there existed no mechanism to restrain the behavior of policymakers from meeting this increased demand with increased rates of spending in the public sector.

The investigation by Buchanan and Wagner of the influence of Keynesian fiscal institutions on the perceptions of both policymakers and individual taxpayers as they made collective choices prompted them to call for a reform of the fiscal constitution. In devising this reform, they contended that of primary importance was the institution of some 'meaningful, constitutional norm . . . independently of just what this norm might be within rather broad limits' (Buchanan and Wagner 1977, p. 175). Its chief attribute must be that it was 'simple and straightforward, capable of being understood by members of the public'; it 'must be capable of offering clear criteria for adherence and for violation'; and this 'fiscal rule must reflect and express the values held by the citizenry' (Buchanan and Wagner 1977, p. 175). The particular rule they selected was the institution of a balanced budget amendment, because it would 'allow for somewhat more conscious and careful weighing of costs and benefits' on the part of both citizens and policymakers in the federal budget process (Buchanan and Wagner 1977, p. 176). In addition, Buchanan and Wagner advocated the institution of a monetary rule that would instruct the Federal Reserve 'to increase the monetary base at a rate roughly equivalent to the rate of growth in real output in the national economy' (Buchanan and Wagner 1977, p. 182). This rule would serve the dual purpose of constraining the behavior of the monetary authority and maintaining 'approximate stability in the level of product prices' (Buchanan and Wagner 1977, p. 182)

CONCLUSION

With his application of the theory of public choice to the consideration of Keynesian theory of economic policy, Buchanan developed an alternative case for laissez-faire during the years of the Keynesian consensus. He contended that, from a perceptual point of view, the existent structure of fiscal institutions became an additional endogenous variable in the decision calculus of individuals as they chose between private and public provision of goods and services. When applying this idea to the consideration of Keynesian fiscal institutions, Buchanan hypothesized that the existent institutional structure

biased the decisions of individuals toward the creation of deficits, inflation and an expanded public sector. Based on that analysis he recommended the institution of two rules, a balanced budget amendment and a legislated rate for monetary growth, to prevent politicians and the monetary authority from responding to the individual taxpayer's demand for deficits, inflation and an expanded public sector.

Buchanan put together this case with an intriguing amalgam of ideas, many taken from the laissez-faire pioneers. He clearly built his work on the theoretical ideas that he took from Knight and Wicksell. From his mentor Knight, he took the focus on the process of coordinating individual choice activity and the theory of indeterminate uncertainty. When applying these ideas to consider individual choices in voting, the process of creating institutional structures for collective choice emerged as most important and the fact of uncertainty restricted analysis to consideration of alternative policy rules, insights Buchanan claimed were stimulated by his reading of Wicksell. He followed Hayek in conceiving of political rules as an example of spontaneous coordination, rather than the design of mythical, benevolent despots. It should be noted that many of his theoretical decisions also seemed to harmonize with the personal values he brought to his research – a market libertarian with antistate and antiestablishment tendencies. Thus, it is not surprising that he felt he needed to address seriously Friedman's charge to economists to find ways to separate positive and normative analysis by creating a type of positive political economy.

Neither is it surprising that Buchanan attempted to distance himself from the normative content of his work in several ways. First, he presented his models of political choice as a type of Friedman's positive economics: hypotheses founded on the unrealistic assumption of purely self-interested political behavior that could be tested in the voting process. Second, his interpretation of subjectivist economics conceptualized the social scientist as capable of imputing knowledge of the intentions of individuals to find regularities in political behavior, without his own normative ends influencing the analysis. Third, he claimed that his research followed the role of dispassionate intellectual set out for him by Knight:

I recognize, of course, that my own research-publication record may be interpreted as the output of a methodological and normative individualist, whose underlying purpose has always been to further the philosophical support for individual liberty. In subjective recall, however, this motivational thrust has never informed my conscious work effort. I have, throughout my career and

with only a few exceptions, sought to clarify ambiguities and confusions, to clear up neglected pockets of analysis in the received arguments of fellow economists, social scientists, and philosophers. To the extent that conscious motivation has entered these efforts, it has always been the sheer enjoyment of working out ideas, of creating reality that is reflected finally in the finished manuscript. (Buchanan 1990, p. 81)

But in the final analysis, Buchanan really did not succeed in distancing himself from his normative views. For once they led him to select a consistently individualistic view of the polity that restricted analysis to the constitutional level, his policy proposals recommending the institution of a *laissez-faire* system of rules seem foreordained. And not too long ago, even Buchanan recognized this possibility. For when he reflected on the theoretical questions he asked and the anomalies he observed, his 'normative mindset may be more important than I realized' (Buchanan 1992a, p. 155).

NOTES

1. These centers include the Thomas Jefferson Center for Studies in Political Economy and Social Philosophy at the University of Virginia and the Center for Study of Public Choice first at Virginia Polytechnic Institute and then currently at George Mason University.
2. Recall that Simons also used the phrase 'relatively absolute absolute', in his case without any attribution to Knight. Both men used the phrase in the context of describing standards of behavior, but employed it for different purposes. Simons allowed for standards to evolve in relation to his conception of society as a social organism. Buchanan used the phrase as a justification for gradualism in social action.
3. Don Patinkin, who completed both undergraduate and graduate studies at the University of Chicago from 1941–47, confirmed these areas of emphasis in Knight's teaching during that time (Patinkin 1973a).
4. Recall that Knight had also questioned the potential for benevolent despots in his 1930s case for *laissez-faire*. Thus it is easy to imagine Buchanan being receptive to a similar idea when reading Wicksell.
5. Buchanan later chose the relationship between the ideas of Wicksell and public choice theory as the subject of his Nobel Prize lecture (Buchanan 1987a).
6. Further support of Buchanan's acceptance of the fundamental difference made in collective choice by the existence of Knightian uncertainty is found in his summary of Knight's contributions to economic theory:

Moreover, the distinction [between risk and uncertainty] returns to its formal validity, despite modern notions of probability, when it is recognized that insurance against the possibility of making wrong decisions removes all content from decision itself. To this extent, therefore, genuine Knightian uncertainty must exist in a world where decisions must be made and where decisions may be erroneous. As Knight quite explicitly stated in this early work [*Risk, Uncertainty and Profit*], where there is not genuine uncertainty there are no decisions'. (Buchanan 1968, p. 425)

7. It was on this basis that Buchanan criticized the scientific status of Simons's recommendation for a more progressive tax structure. Buchanan argued that Simons had used his own ethical preference for 'the desirability for greater income equality among persons' as an external norm for judging the fiscal structure, a practice inconsistent with individualist, positive models (Buchanan 1967b, p. 225).
8. Buchanan and Wagner cited that their notion of weakened cost signals affecting budgetary outcomes was akin to that found in the psychological literature on information processing. In that literature, it was assumed that the strength of the signal was inversely related to the amount of noise present when the signal was transmitted (see Buchanan and Wagner 1977, pp. 130–31).
9. Buchanan consistently rejected the Ricardian Equivalence Theorem, which postulated that individuals were indifferent to the mode of financing public goods because, under the assumption of perfect knowledge, the present values of all the alternatives were identical. He based his rejection on two factors: the unrealistic informational requirements that the theorem postulated and its disregard of the endogenous character of fiscal institutions (see for example, Buchanan 1958a, 1976 and Buchanan and Wagner 1977).

7. Robert E. Lucas, Jr and new classical economics

The professional reception to the research of Robert E. Lucas, Jr (b. 1937) brings full circle the evolution in the attitude toward *laissez-faire* in twentieth-century macroeconomics. In the early 1970s he began work on the new classical models ostensibly as an extension of the natural rate hypothesis developed by Friedman and Phelps; by the end of the decade these models emerged into the standard framework for analysis in macroeconomic theory. As a result, in much the same fashion that Friedman developed the monetarist counter-example in the framework of Keynesian economics, Keynesian economists began to formulate their research in new classical structures.¹ Further, the new classical models demonstrated more rigorously than those developed by Friedman and Buchanan that the economy is managed more efficiently with a *laissez-faire* framework of policy rules. For these models portray discretionary policy as ineffective in offsetting business cycles in both the long run *and* the short run and as a cause of instability in the economy. In effect, Lucas had inspired a counter-revolution against Keynesian economics and its interventionist policy prescriptions. In 1995, the Nobel Committee awarded Lucas, the leader of this revolution, its prize in economics 'for having developed and applied the hypothesis of rational expectations, and thereby having transformed macroeconomic analysis and deepening our understanding of economic policy'.

This change in prominence from Keynesian to new classical models took place in a professional environment influenced by both external events and internal debates. In 1965 an escalation in the Vietnam War had made economists more conscious of the problem of inflation (Johnson 1971, p. 59), a concern that was reinforced by an acceleration in the rate of inflation in the late 1960s (Gordon 1976, p. 197). In addition during the 1960s, the monetarists and Keynesians received new evidence for their debate regarding the effectiveness of monetary versus fiscal policy. The results of the 1966 monetary squeeze and the 1968 tax

surcharge indicated 'that monetary effects on nominal income dominated fiscal effects when the two were operating in opposite directions' (Gordon 1976, p. 197). Finally in the mid-1970s, episodes of stagflation called into question theories of inflation based on the Phillips Curve trade-off between unemployment and inflation.

With respect to internal developments in macroeconomic theory, during the 1950s and 1960s economists had directed their research efforts toward developing microeconomic foundations that were consistent with Keynesian macroeconomics. They worked from the neoclassical postulate of individual optimization to construct models of sectors of the economy such as the labor market and the product market. In turn these sectoral models were joined to form a macroeconomic model of the economy. A continuing problem remained in rationalizing the equilibrium premise of microeconomic models with the disequilibrium premise of the Keynesian models. Economists postulated a variety of factors to explain this inconsistency, such as money illusion (Friedman 1968a) and imperfect information (Phelps 1970).

Lucas has connected his research with that of all the laissez-faire pioneers. He regarded the new classical models as an extension of the natural rate models developed by Friedman and Phelps (Lucas 1982, p. 56). Early on he considered his business cycle research as mathematical representations of the ideas on which Hayek built his first case for laissez-faire (Lucas 1982, p. 56; see also Lucas 1977, p. 215). Lucas also believed that the new classical models added support for policy rules, as recommended earlier by Simons, Friedman and Buchanan (see for example Lucas 1977, p. 234; Lucas 1980b, pp. 248–52; Lucas 1981a, p. 17; and Lucas 1987, p. 104). Finally, he stated that the ideas underlying the Lucas critique of econometric policy evaluation were implicit in both Knight's *Risk, Uncertainty and Profit* (1921) and Friedman's *Theory of the Consumption Function* (1957) (Lucas 1976, p. 106).

PRE-ANALYTIC FOUNDATIONS

Lucas brought two crucial pre-analytic foundations to his study of economics. First, he viewed his professional role as that of a technical scholar. Second, he had a definite view of the way the economist should conduct economic research, including a method for theory development

and assessment, the use of two fundamental postulates to derive economic behavior and the utilization of mathematical techniques for model building.

Lucas was born in Yakima, Washington in 1937; like Friedman, the son of restaurant owners. Shortly after his birth the Lucas Ice Creamery felt the effect of the Great Depression and went into bankruptcy. At that time, his parents severed their families' connection with the Republican Party and became ardent supporters of the New Deal. Lucas believed that he learned his independence of thought from the example of his parents during this episode, and political and economic discussions went on to become prominent parts of Lucas's childhood. During World War II, the family moved to Seattle for work, and Lucas spent the remainder of his childhood there. Lucas was good at both math and science during high school, and his family expected him to enroll in the University of Washington to study engineering. But he wanted to leave home, and a scholarship to the University of Chicago made that dream possible. Lucas went east to the University of Chicago for his undergraduate training, and he earned a BA in history in 1959.

Lucas's first interest in economics came from some undergraduate reading of the works of Belgian historian Henri Pirenne, who stressed the importance of economic forces in history. For graduate study, he initially remained with history and enrolled in a doctoral program at Berkeley. While at Berkeley, he took an economic history course and audited an economic theory course. It was in the economics courses that he 'first learned what a technical field economics is and how impossible it was to pick it up as an amateur' (Lucas 1997, p. 146). Excited by how 'people were using mathematics for social science questions', he decided to study economics rather than history (Lucas 1997, p. 146). He returned to Chicago, because the university would provide him with financial support. He went on to earn his PhD in 1964. In 1963 he accepted a position at Carnegie-Mellon University. In 1974 he returned to the University of Chicago, where he currently serves as the John Dewey Distinguished Service Professor.²

The Task of the Economist

Graduate training had undergone a transformation between the years of the formation of the Knight affinity group in the 1930s to the time Lucas appeared on the scene. As Emmett has described:

through the early 1930s, a Chicago economist was an intelligent person dedicated to studying a particular set of problems and exercising a public responsibility to widen the realm of intelligence through teaching and researching. By the late 1940s, a Chicago economist was a person who possessed specialized methods for the acquisition of knowledge and the ability to discern between truth (knowledge that in principle was in accordance with the discipline's methods) and error. The Chicago economist's public responsibility now lay in acquiring new knowledge, training graduate students in the discipline's methods, and assisting the public in understanding the boundaries of the discipline's competence. (Emmett 1998, p. 146)

Emmett attributed a major part of this change to the institution of a workshop model for graduate training, adapted from the Cowles Commission and intended to teach students to become scientific craftsmen (Emmett 1998, pp. 146–7).³ Lucas was a part of Arnold Harberger's workshop on public finance, and his dissertation was a piece of Harberger's project to analyze the effects of changes on the US tax structure.

When Lucas described what he believed to be the proper role for economists, it appeared he learned his lessons at Chicago well: 'Professional economists are primarily scholars, not policy managers. Our responsibility is to create new knowledge by pushing research into new, and hence necessarily controversial, territory' (Lucas 1994, p. 226). Thus to Lucas, professional economists worked to find new knowledge, not to become policy advisers. Likewise, professional economists were supposed to insure that they took their theoretical questions from gaps in existing theory, rather than going beyond the discipline's boundaries for questions to research:

A lot of older economists seem to be to be solely concerned with politics, as opposed to scientific matters. People are asking the wrong questions; they are taking questions from Washington rather than thinking about what's puzzling them or taking a more scientific point of view. (Lucas 1982, pp. 52–3)

As a result, the research process proceeded as 'a paper-by-paper, problem-by-problem kind of thing' (Lucas 1997, p. 152).

The Proper Method for Analysis

In essence, Lucas viewed economic theory as a 'physical analogue', a 'fully articulated artificial economic system', a 'mechanical imitation economy' or a 'robot imitation of people' (Lucas 1980a, pp. 292, 271

and 272; Lucas 1982, p. 49).⁴ In this form, economic theories 'serve as laboratories in which policies that would be prohibitively expensive to experiment with in actual economies can be tested out at lower costs' (Lucas 1980a, p. 271). To perform this role well, Lucas believed that the 'artificial "model" economy [must] be distinguished as sharply as possible in discussion from actual economies' (Lucas 1980a, p. 271). Consequently, economic theory 'will necessarily be artificial, abstract, patently "unreal" ' (Lucas 1980a, p. 271).

Lucas acknowledged that not all artificial economies serve equally well as laboratories. As a result, he advocated that the analyst develop models that are amenable to econometric testing to facilitate comparison among rival theories. This method entailed 'subjecting them [the models] to shocks for which we are fairly certain how actual economies, or parts of economies would react. The more dimensions on which the model mimics the answers actual economies give to simple questions, the more we trust its answers to harder questions' (Lucas 1980a, p. 272).⁵

When using a positive method of this type, the facts that the analyst relied on to describe actual economies became crucial. They established the benchmark for comparison among rival models. In Lucas's case he claimed that 'the basic source for "my" facts, not very surprisingly, turned out to be Friedman and Schwartz's *Monetary History* (1963) . . . [And] from Friedman and Schwartz, it is a short and direct step back to the work of Wesley Mitchell (1913)' (Lucas 1981a, p. 16).

Lucas maintained that progress in economics 'means getting better and better abstract, analogue models' (Lucas 1980a, p. 276). He suggested that economists have looked to two sources in order to improve these 'analogue models' over time. First, they made use of 'purely technical developments that enlarge our abilities to construct analogue economies', such as improvements in mathematical methods and computational capacity; second, they responded to 'changes in the questions we want models to answer or in phenomena we wish to understand or explain' (Lucas 1980a, pp. 272–3 and 284).

Yet, when evaluating these potential catalysts for theory development, Lucas asserted that 'purely technical developments' promoted greater scientific progress. For example, when isolating the revolutionary aspects of the Keynesian revolution, he judged Keynes's contribution as 'a more political event than a scientific event . . . *The General Theory* is a political response to the Depression and to the discrediting of conventional economics that resulted from it' (Lucas 1982, p. 56). Yet even though Keynes did not make a major scientific contribution, he

'left an opening for younger econometricians and mathematical economists to take over and write down models . . . So people like Klein and Tinbergen took over because they had the exciting new methods' (Lucas 1982, p. 56). Thus in Lucas's estimation, the scientific essence of the Keynesian revolution was the technical developments it encouraged.

The foundation of Lucas's work is established on two fundamental postulates: '(a) that markets be assumed to clear, and (b) that agents be assumed to act in their own self-interest' (Lucas and Sargent 1978, p. 57). Lucas followed this approach because he believed that

An equilibrium model is, by definition, constructed so as to predict how agents with stable tastes and technology will *choose* to respond to a new situation. Any disequilibrium model, constructed by simply codifying the decision rules, which agents have found it useful to use over some previous sample period, without explaining *why* these rules were used, will be of no use in predicting the consequences of nontrivial policy changes. (Lucas 1977, pp. 220–21)

In part Lucas associated his emphasis on equilibrium modeling with his graduate teachers at the University of Chicago. For example, he cited Friedman as a 'big influence' in his intellectual development, interestingly not as a macroeconomist, but as a price theorist (Lucas 1982, p. 30). Lucas found Friedman's price theory sequence one of the most exciting courses he ever took, because it showed him 'the breadth of problems . . . that [one] could address with economic reasoning' (Lucas 1997, p. 146). Later when explaining the decision he and Leonard Rapping made to model unemployment as a 'side story' to a supply and demand model for employment and wages, Lucas stated that 'In the tradition of Friedman and [Gregg] Lewis it is hard to think about labor markets without supply and demand. You have to tell how wages and employment arise from certain shifts in supply and demand curves. That was the rule we imposed on ourselves' (Lucas 1982, p. 36).

Lucas claimed that he and Rapping were also influenced by the effort at that time by Keynesian economists to develop microfoundations for their model of the macroeconomy:

We were modeling [the labor market] after the work of people like Modigliani and Jorgenson, who weren't Chicago people . . .

See, this business of microeconomic foundations had been kicking around for years. Rapping's and my paper is pretty conventional; that's what everybody was doing. (Lucas 1982, p. 36)

But his view that the proper microfoundations for macroeconomics theory consisted of both market clearing and individual optimization set him apart from his Keynesian contemporaries, who continued to explore disequilibrium solutions. This distinction between Lucas and Keynesian economists was made sharper in a later statement in which he recommended collapsing macroeconomics into microeconomics:

The most interesting developments in macroeconomic theory seem to be describable as the reincorporation of aggregative problems such as inflation and the business cycle within the general framework of 'microeconomic' theory. If these developments succeed, the term 'macroeconomic' will simply disappear from use and the modifier 'micro' will become superfluous. We will simply speak, as did Smith, Ricardo, Marshall and Walras, of economic theory. If we are honest, we will have to face the fact that at any given time there will be phenomena that are well-understood from the point of view of the economic theory we have, and other phenomena that are not. We will be tempted, I am sure, to relieve the discomfort induced by discrepancies between theory and facts by saying that the ill-understood facts are the province of some other, different kind of economic theory. Keynesian 'macroeconomics' was, I think, a surrender (under great duress) to this temptation. It led to the abandonment, for a class of problems of great importance, of the use of the only 'engine for the discovery of truth' that we have in economics. (Lucas 1987, pp. 107–8)

Lucas had turned to economics from history, because he was excited about applying mathematics to economic analysis, so it is not surprising that he would also emphasize the importance of incorporating mathematical techniques of analysis in his work. This approach derived from his reading of Paul Samuelson's *Foundations of Economic Analysis* (1947), what he termed as 'the bible for my generation of economists' and deemed as essential to his intellectual development as Friedman's price theory course (Lucas 1997, p. 146). While Lucas believed that Friedman was instrumental in teaching him to think in price theoretic terms, 'he wasn't good for teaching tools' (Lucas 1982, p. 30). He read the book, line by line, the summer before graduate school and discovered that: 'It's a "how-to-do-it" book, a great book for first-year graduate students. It says, "Here's the way you do it." It lets you in on the secret of how you play the game, as opposed to cutting you off with big words' (Lucas 1982, p. 30). He later honed his mathematical skills by taking the ideas that Friedman presented in class each day and translating them into the mathematics learned from Samuelson. Lucas's reading of Samuelson's *Foundations* certainly reinforced his preference for equilibrium modeling. For Lucas ascribed to this intellectual mentor the

technical achievement of 'advanc[ing] . . . the main ingredients for a mathematically explicit theory of general equilibrium' (Lucas 1980a, p. 278).

Lucas also viewed mathematical modeling as a useful means to improve communication among economists during periods when professional consensus did not exist. For example, during the consensus of the 1960s, Lucas stated that, 'it was possible to use a shared verbal shorthand to convey fairly complicated ideas' (Lucas 1981a, p. 17). But, 'when consensus has broken down, such looseness becomes a barrier in professional debate, and it becomes impossible for the public to distinguish language that summarizes underlying analysis and language that is just talk' (Lucas 1981a, p. 17). As a result, Lucas contended that mathematical models were essential so that analysts can 'get behind terms like *theory* or *equilibrium* or *unemployment* to get at the specific constructs or facts they are being used to summarize' (Lucas 1981a, p. 17).

DEVELOPMENT OF THE NEW CLASSICAL MODEL

Lucas's early research focused on econometric analysis of substitution ratios for capital and labor, antitrust issues (Lucas 1982, p. 31) and investment theory (Lucas 1967a, 1967b; and Lucas and Prescott 1971). Later he turned his attention to macroeconomics and collaborated with Rapping as a participant in the research program to construct micro-foundations for the Keynesian model (Lucas and Rapping 1969 and 1972). In the 1970s Lucas changed his focus to analyzing business cycles in an equilibrium framework. This work became the basis for his case for *laissez-faire*.

In his initial work in macroeconomics, Lucas collaborated with Rapping to aid Keynesian economists in the construction of a model of the labor market founded on individual optimization that could join with those of other sectors to form a comprehensive model of the macroeconomy (Lucas and Rapping 1969). Their model of the wage-price sector used the postulates of individual optimization to assure a competitive equilibrium solution, and they employed the adaptive expectations hypothesis used by Friedman to account for disequilibrium on an economy wide basis. Yet, even at that juncture, they were troubled by the adaptive expectations scheme; as they stated in their conclusion, it provided only 'the very crudest expectations model . . . hold[ing] only

under reasonable stable rates of price increase' (Lucas and Rapping 1969, p. 43). In addition, questions continued to puzzle them, including how 'the price expectations for labor-market decisions differ from those relevant for bond-market decisions' or how 'it is possible . . . to describe an entire economy operating in a mutually consistent way that is led into large-scale employment fluctuations via information imperfections alone' (Lucas 1981a, pp. 6–7).

Phelps selected this paper for inclusion in a volume he was editing about the microeconomic foundations of employment and inflation theory. In the introduction, Phelps presented a verbal argument for a general equilibrium reconciliation of the natural-rate hypothesis and business cycle theory that relied on information imperfections (Phelps 1970, pp. 1–6). At Carnegie-Mellon at that time, several of Lucas's colleagues were investigating problems in economic dynamics and the formation of expectations, including John Muth, the inventor of the rational expectations hypothesis. At a conference for contributors to the Phelps volume, Lucas stated that 'much of the discussion . . . involved questions that seemed to stand in the way of casting this argument in modern mathematical form' (Lucas 1981a, p. 7). Not surprisingly given his espousal of mathematical analysis and the ideas floating around Carnegie-Mellon, Lucas was intrigued by the theoretical puzzle of the possible relationship between market clearing and individual optimization. In an attempt to solve it, he developed the first of what came to be known as new classical models of the economy presented in his paper 'Expectations and the Neutrality of Money' (1972a).

Lucas began this analysis 'persuaded . . . by the arguments of Friedman and Phelps that a natural-rate hypothesis was valid and consistent with the main features of the observed business cycle' (Lucas 1981a, p. 8). This assessment is not surprising given that the natural-rate hypothesis is premised on Lucas's favored notion of market clearing. At the same time, following from his views on theory development, Lucas stated that 'the form this persuasion took was the conviction that an artificial, model society could be constructed in which these objectives were verifiably valid' (Lucas 1981a, p. 8). In constructing this artificial, model society, Lucas determined to reconcile the natural rate hypothesis with an equilibrium model of the business cycle (Lucas 1981a, p. 7; and 1981b, p. 561).

Lucas accepted Friedman's hypothesis that monetary forces served as the originating cause in business cycles. Thus in developing this model, Lucas's research agenda became to reconcile the notion of monetary

neutrality, as a proxy for the natural rate, with that of money 'as the principle source of instability', as the proxy for the business cycle (Lucas 1981b, p. 561). In order to cast this problem into a mathematical framework, Lucas brought together a variety of techniques developed by other analysts. To model a competitive equilibrium, he adapted the overlapping generations model developed by Samuelson (1958)⁶ and the notion of a contingent claims equilibrium developed by Kenneth Arrow and Gerald Debreu (Arrow and Debreu 1954; and Debreu 1959).⁷ To develop an econometrically testable model, he adopted Muth's rational expectations hypothesis (1961) and Phelps's idea of an island economy (1970).⁸ Lucas's novel combination of these techniques resulted in the archetypal new classical model. A short discussion of Lucas's adaptation is relevant.

Lucas described the structure of his model economy as a version of Samuelson's overlapping generations model. It was a two-period model with the first period of life devoted to the production of perishable commodities. The only other good was fiat money issued by the government given to the older generation as beginning-of-period transfer. The only exchange that could take place was a transfer of perishable output for the fiat money of the old.

Lucas's concept of equilibrium, borrowed from Arrow and Debreu, was one in which 'an economy follow[ed] a multivariate stochastic process . . . [and] at each point in time' exhibited cleared markets (Lucas and Sargent 1978, p. 58). Arrow and Debreu developed the model of the contingent claims equilibrium under the assumption that agents had complete information about the prices of goods in all future periods. But Lucas stated that 'it was soon recognized by many researchers that the idea of viewing a dated, contingent commodity as a function of stochastically determined shocks is an invaluable one also in situations in which information differs in various ways among traders' (Lucas 1980a, p. 285). In his later conception of a contingent commodity, the role of expectations became crucial in influencing the behavior of traders.

Lucas selected Muth's hypothesis of rational expectations to represent the process by which agents form expectations in a model society with a general equilibrium. In adopting this technique, Lucas used a theory of expectations consistent with the postulate of individual optimization he had deemed essential to his concept of the proper research method. Individual optimization is maintained, because the rational expectations hypothesis simply extends the neoclassical assumption of optimizing behavior to encompass the economic agent's process of

forming expectations regarding future labor supply and consumption. When using the hypothesis the analyst assumes that rational agents will seek out all possible sources of information as they form their expectations and that they will learn from past mistakes rather than persisting in behavior once they realize it is detrimental.

The rational expectations hypothesis also permitted the econometric testing of the new classical model essential to Lucas's advocacy of positive methods. When formalizing the rational expectations hypothesis, Muth assumed that the 'expectations . . . tend to be distributed, for the same information set, about the prediction of the theory (or the "objective" probability distribution of outcomes)' (Muth 1961, p. 316). This technique allowed Lucas to identify an agent's subjective forecasts, since this hypothesis implied that agents' subjective forecasts are identified with 'the predictions of the relevant economic theory' (Muth 1961, p. 315).

The final tool Lucas adopted in the new classical model was Phelps's notion of an island economy. In this scheme, the analyst posits individual suppliers as unable to distinguish whether the causes of current price movements are relative or general impacts. As a rational economic agent, the individual supplier makes his best estimate whether an observed price movement signifies a change in the relative demand for his good or a change due to movements in the general price level resulting from monetary impacts. Lucas assumed that, because of misperceptions about relative and general price changes, the individual supplier did not immediately incorporate the effects of monetary changes into his expectations. As a result, monetary changes could have the effect of distorting market price signals. Thus, the agent's misconceptions of relative prices could lead to fluctuations in real output (Lucas 1972a and 1973; Lucas and Sargent 1978). With this technique Lucas was able to maintain the postulate of individual optimization, since any observed behavior classified as less than optimal resulted from differences in the information among traders, rather than the agent's own actions.⁹

The new classical model reconciled the natural-rate hypothesis with an equilibrium theory of the business cycle. The natural-rate hypothesis was maintained by 'postulating agents free of money illusion, so that the Ricardian experiment of a fully announced, proportional monetary expansion will have no real consequences' (Lucas 1972a, p. 85). In a setting in which suppliers lacked perfect information, policymakers can affect the variance of the monetary growth rate. As a result, unanticipated policy leads agents to alter their behavior in a manner consistent

with observed time-series data presented by Friedman and Schwartz in their history of the business cycle (Lucas 1972a, p. 84; and 1973, p. 141).

Lucas believed it to be the responsibility of the professional economist to generate controversy, and, indeed, his new classical macroeconomics did, primarily for its use of a general equilibrium approach and the assumption of rational expectations. In his first responses to his critics, he followed much the same tack of Friedman by appealing to a 'verbal tradition' (Lucas 1980a, p. 286). For example, to justify the use of the rational expectations hypothesis, he appealed to the work of Knight and Mitchell. He claimed that the rational expectations hypothesis was 'useful in situations in which the probabilities of interest concern a fairly well defined recurrent event, situations of "risk" in Knight's terminology' (Lucas 1977, pp. 223–4). And in order to apply the rational expectations hypothesis to business cycle theory, Lucas additionally had to assume that business cycles manifested a 'recurrent character', that they represent 'repeated instances of essentially similar events' (Lucas 1977, p. 224). He believed that post-World War II time series revealed 'a pattern of recurrent, roughly similar "cycles" in Mitchell's sense' and, therefore, allowed him to use the rational expectations hypothesis (Lucas 1980a, p. 284). Likewise, to justify the use of an equilibrium approach, Lucas cited Hayek's *Monetary Theory and the Trade Cycle*, research Hayek completed while developing his first case for laissez-faire:

The incorporation of cyclical phenomena into the system of economic equilibrium theory, with which they are in apparent contradiction, remains the crucial problem of Trade Cycle Theory. By 'equilibrium theory' we here primarily understand the modern theory of general interdependence of all economic quantities, which has been most perfectly expressed by the Lausanne School of theoretical economics. (Hayek in Lucas 1977, p. 215).

And he went on to argue that following 'Hayek's statement of the problem . . . [would provide] the most rapid progress toward a coherent and useful aggregate economic theory' (Lucas 1977, p. 216).¹⁰ Given Hayek's rejection of aggregative methods, one wonders how superficial Lucas's reading of Hayek was. And not surprisingly, by the late 1980s, once new classical economics was ensconced in the macroeconomics, Lucas no longer 'thought of [him]self as a kind of Austrian, [because] Kevin Hoover's book [1988] persuaded [him] that this was just a result of my misreading of Hayek and others' (Lucas 1997, p. 146).

ECONOMETRIC IMPLICATIONS OF NEW CLASSICAL ECONOMICS

Even though Lucas included econometric testing as an important feature of a proper research method, he relied on other economists to complete the bulk of the tests of his new classical model. He did complete a simple econometric test based on cross-country data that produced results that were consistent with his hypothesis (Lucas 1972b). Other analysts devised time-series tests using data from a single country and also produced results consistent with the implications of the new classical model (see Barro 1977, 1978 and 1979; Small 1979; Barro and Rush 1980).¹¹

Lucas's greater contribution to the issues surrounding the econometric testing of new classical economics is the so-called Lucas critique of Keynesian econometric theory and quantitative policy analysis. Lucas identified the Keynesian approach as the theoretical underpinnings for the large-scale econometric models such as the Wharton model that economists used to forecast and to test rival macroeconomic theories of the economy during the 1970s. According to Lucas's description, these models drew on techniques for building econometrically testable models developed by the Cowles Commission during the 1940s. In essence, this approach built on the principles of general equilibrium analysis to advocate that a properly testable economic theory contained a system of simultaneous equations with endogenous variables describing behavioral relationships in the economy and exogenous variables describing the structure of the economy and error terms signifying random shocks to the economy (Christ 1952, pp. 31–2). Lucas criticized this method because it assumed that the structure of the economy remained stable under alternative policies. In his estimation the new classical approach to model building '*indicates that this presumption is unjustified*' (Lucas 1976, p. 111). Rather, in a general equilibrium framework with rational expectations, a modification in policy would alter the values of the exogenous variables describing the structure of the economy because rational agents would change their behavior as they learned about the policy change (Lucas 1981a, p. 11). Thus in a general equilibrium framework with rational expectations, Lucas asserted that a policy must become an endogenous variable, so that a change in policy could alter both the time-series behavior and the behavioral parameters governing the rest of the system (Lucas 1976, p. 125).

Lucas pointed out that practitioners using large-scale econometric

models implicitly recognized that a change in policy variables altered the structure of the economy, because they routinely modified equations to improve their short-term forecasts (Lucas 1976, p. 108). However, Lucas stated that this adjustment would not work 'for longer term forecasting and policy simulations' because 'ignoring the systematic sources of [exogenous variable] drift will lead to large, unpredictable errors' (Lucas 1976, p. 111).

LUCAS'S CASE FOR LAISSEZ-FAIRE

Lucas brought together an innovative combination of techniques to construct a theoretical case for the superiority of rules over authority that was even more radical in its implications than those cases developed by the earlier laissez-faire pioneers.¹² When individual suppliers anticipated monetary policy in the artificial, model society of new classical economics, they immediately incorporated that information into their wage-price expectations and did not alter their supply of labor and real output. In contrast, unanticipated monetary policy created misperceptions of relative price changes, thus causing changes in labor supply and real output. Despite his model's predictions of the momentary effectiveness of unanticipated monetary policy, Lucas asserted that the more frequently policymakers exploit their ability to induce price variability, the more difficult it is for individuals to interpret the signals sent by price changes. Eventually, individual agents would disregard the information implicit in observed price movements and would not change their supply behavior. Hence, the monetary authority would lose its ability to affect the level of real output (Lucas 1973, p. 141; Lucas and Sargent 1978, p. 60).

Lucas provided additional support for policy rules in his critique of econometric policy evaluation. He asserted that the method of initiating policy changes had a crucial effect on the behavioral patterns of agents in the system. If policymakers did not pre-announce a change, the new policy 'bec[a]me known to agents only gradually' and movements to new behavior patterns 'will be unsystematic and econometrically unpredictable' (Lucas 1976, p. 125). If policymakers made changes according to pre-announced rules, 'there is some hope that the resulting structural changes can be forecast on the basis of estimation from past data of [behavioral patterns]' (Lucas 1976, p. 125). Thus, given the present state of knowledge regarding econometric forecasts, policy rules were superior

to discretionary policy because 'the only *scientific* quantitative policy evaluations available to use are comparisons of the consequences of alternative policy rules' (Lucas 1976, pp. 125–6). Lucas's implicit interpretation of the term 'scientific' derives from his notion of the proper foundation for theory development, that is, the tools of general equilibrium analysis founded on the postulates of market clearing and individual optimization.

CONCLUSION

Lucas stands out as an accomplished developer of neoclassical economics. With a borrowed set of techniques he 'reinvent[ed]' what he conceived as a 'dynamic equilibrium theory' of the business cycle (Lucas 1987, p. 2). He adopted the rational expectations hypothesis developed by Muth to place the new classical model in a general equilibrium framework and to have a probabilistic basis for econometric policy evaluation. He adopted the overlapping generations model of Samuelson and the notion of a contingent claims equilibrium developed by Arrow and Debreu to place agents in a dynamic environment that took into consideration time and uncertainty. He used Phelps's notion of an island economy so that his agents could continue to act rationally even in the face of imperfect information.

Yet, in interpreting Lucas's case for *laissez-faire*, it must be recognized that it is defined within the context of his borrowed set of tools and the modeling decisions he made when adopting them. In particular, in citing technical developments as the site of analytic progress and selecting general equilibrium modeling as the appropriate framework to study economic phenomena, Lucas confined his analysis to questions that were technically conducive to the tools he had available to accomplish those goals. Further, by virtue of his uncritical acceptance of the natural-rate hypothesis and Friedman's facts describing a monetary-induced business cycle, he founded his case for *laissez-faire* on a set of hypotheses that not all macroeconomists accept as valid. Finally, when adopting Friedman's instrumental method, Lucas presented his case for *laissez-faire* such that its analytic merit could be determined on the basis of empirical tests. Yet, econometric studies of the new classical models are inconclusive. Thus, while Lucas successfully constructed a more rigorous case for *laissez-faire*, in the final analysis, his theoretical work is predisposed toward *laissez-faire* conclusions. First, his judgment of

what satisfied the definition of a useful tool limited the avenues by which economists could rationalize counter-cyclical policy within the body of economic theory; and, second, the tools he borrowed from Friedman, in particular, were infiltrated with an ideological bias toward laissez-faire.

NOTES

1. Early examples of New Keynesian research using the rational expectations hypothesis include Stanley Fischer (1977), Phelps and John Taylor (1977), and Alan Blinder and N. Gregory Mankiw (1984).
2. The biographical data was compiled from Klammer (1983), Snowdon and Vane (1999) and Lucas (1995).
3. Interestingly, according to Emmett, in a memo '(undated but probably from the late 1940s or early 1950s)', H. Gregg Lewis praised Knight 'as a "shining example" of the economist as moral philosopher', at the same time he faulted his colleagues for believing that most students were made of the same stuff (Emmett 1998, p. 146).
4. Lucas did 'not know the background of this view of theory' but states as 'an immediate ancestor' to his own, the argument of Herbert A. Simon (1969) (Lucas 1980a, p. 292n). Though Lucas acknowledges that Simon, a colleague at Carnegie-Mellon, was often critical of the outcome focus of the neoclassical analysis of decision-making, Lucas contended that 'for some questions [Simon believed] a superficial view of the process is safe enough' (Lucas 1982, p. 48). In support, Lucas cited Simon's example discussing Arctic animals with white fur. The analyst observed that the development of white fur was a useful outcome for Arctic animals; in turn he can incorporate this information in his analysis without being able to explain the reasons for this turn of events (Lucas in Klammer 1983, p. 47).
5. Lucas does not state from whom he learned this positivist method for choosing among competing theories of the economy. Yet two individuals he has claimed as intellectual mentors played leading roles in introducing positivistic methods to mainstream economics since World War II. Samuelson presented a version called operationalism (1947). As noted in Chapter 5, Friedman introduced an instrumental version of positivism (1953b). Thus it is likely that Lucas absorbed his mentors' commitment to positivistic methods along with other more overt lessons.
6. In this model, Samuelson posited that an economic agent lived for two periods. During the first period, he earned an income in the form of a perishable commodity; in the second period he earned no income. Given the existence of overlapping generations, the model provided generated a need for money. To prepare for period two, the young could sell some of their perishable income for the fiat currency. Meanwhile, to consume, the old could sell fiat currency for some of the young's perishable income. Equilibrium conditions would be preserved, because net savings of fiat currency would equal zero.
7. In their model, Arrow and Debreu posited that commodities possess four attributes: physical characteristics, location, date of delivery and the state of nature in which the commodity was available. Goods of this type were called dated, contingent commodities, since their availability was contingent upon the occurrence of certain events. Arrow and Debreu assumed that contingent commodities were traded in markets that had (1) a complete set of future markets so that agents possessed the price information necessary to make production and consumption plans for all time

and (2) insurance markets so that agents were able to insure themselves against all possible events. By bringing together the concept of a dated, contingent commodity with a restrictive set of properties regarding the agent's preferences and production sets, Arrow and Debreu demonstrated the existence of a competitive equilibrium (see Arrow and Debreu 1954; and Debreu 1959).

8. Lucas attributed the idea of using imperfect information to reconcile the hypotheses of monetary neutrality and monetary-induced instability to the 'verbal tradition of business cycle theory' that originated with Mitchell who had suggested that agents react to imperfect information signals in a way which, after the fact, appears inappropriate (Lucas 1980a, p. 286). Phelps followed the same tack in his verbal argument for a general equilibrium reconciliation of the natural-rate hypothesis and business cycle theory (Phelps 1970, pp. 1-6).
9. In an early critique of the new classical model, Benjamin Friedman also noted the importance of the assumptions made regarding which actors had what information and at what time. He argued that Lucas's presentation of the aggregate supply function is valid only if agents perceived that the relative prices of their outputs changed before they perceived that the relative prices of their inputs had changed. If it were assumed that perceptions changed in an opposite sequence, agents would alter the supply of labor in a fashion exactly opposite from the observed time series describing business cycles (see B. Friedman 1978, p. 76). James Tobin made a similar point in his 1978 Johansson lectures (Tobin 1980, p. 942).
10. David Laidler, a fellow graduate student at Chicago with Lucas, also characterized new classical economics as neo-Austrian in the early 1980s due to the assumptions of methodological individualism and competitive general equilibrium. His intent was to separate new classical macroeconomics from the monetarism of Friedman (see Laidler 1982).
11. Early on critics began to question these tests. Some faulted Barro's two-step estimation procedure primarily because it forced rationality on the system, permitting only a test of the neutrality proposition (Mishkin 1982). In addition, they have cited incorrect specifications of the money forecasting equation due to the omission of crucial information, such as the interest rate, to which rational agents would realistically have access (Mishkin 1982). They further have criticized the tests for assuming short lag lengths (Gordon 1979; Mishkin 1982). Subsequent empirical studies that address these criticisms suggest that, counter to the predictions of the new classical model, anticipated monetary changes do affect real output (see Mishkin 1978, 1981 and 1982; Gordon 1979).
12. Hoover also argues that new classical economics is distinct from monetarism. He emphasizes methodological differences: Friedman's use of the partial equilibrium method of Marshall and the new classicals' application of the equilibrium method of Walras (Hoover 1984).

8. Conclusion

At the end of our investigation of the evolution of attitudes toward *laissez-faire* the question remains whether the revival was due to significant theoretical developments, to social problems or to ideological influence. A preliminary answer to this question emphasizes the fact that the *social problems* arising out of the late-1960s acceleration in the rate of inflation and the 1970s episodes of stagflation opened the way for the consideration of alternative theories of macroeconomic activity. For when macro-economists reconsidered the Keynesian theory of inflation in more detail, they discovered theories of demand-pull and cost-push inflation that could explain accelerated rates of inflation only by assuming an unlimited supply of idle money balances or passive monetary accommodations by the monetary authority. Further, Keynesian economists could demonstrate the inflation-unemployment trade-off explicit in the Phillips curve, which served as the analytic base for policy discussions in both the academic and the political spheres, only by assuming that individuals were subject to money illusion or that the economy only adjusted with lags. To maintain that rational economic agents did not eventually learn about the effects of money illusion or lagged responses seemed an increasingly untenable proposition in the face of the real-world accelerated rates of inflation. In addition, the Keynesian economists had not provided a rigorous explanation of why the full employment rate of unemployment was so high or why the zero-inflation rate of unemployment was even higher.

With such a multitude of gaps in Keynesian theory, it seemed inevitable that macro-economists would re-evaluate alternative theories of the macro-economy to determine whether they could provide a more adequate explanation of inflation. Our investigation of the doctrine of *laissez-faire* has revealed that in the early 1970s the theories of the second generation of pioneers did in fact provide three alternative explanations of inflation. Both Friedman's monetarist theory of nominal income and the natural-rate hypothesis predicted the accelerated rates of inflation by reference to the differential effects of short-run and long-run

perceptions of economic agents regarding relative price changes. In addition, the natural-rate hypothesis could explain the high level of the full employment rate of unemployment with reference to underlying structural conditions of the labor market. Buchanan's theory of public choice attributed inflation to the unstable mixture of Keynesian policy prescriptions and political democracy. Lucas's new classical model explained inflation with reference to the effects of anticipated and unanticipated changes in relative prices on the perceptions of rational economic agents as they devised their economic plans.

Thus, the *social problems* arising out of accelerated rates of inflation in the late-1960s and the 1970s provided the stimulus for the serious reconsideration of alternative theories of macroeconomic activity.¹ Yet economists still had to determine which, if any of these options, emerged as analytically convincing enough to replace Keynesian economics as the standard framework of analysis.² Ultimately the majority of macro-economists chose to replace Keynesian economics with the new classical theory developed by pioneer Lucas. We have shown that the new classical theory provided the most radical demonstration of the optimality of *laissez-faire* with its proof that discretionary policy was both ineffective and destabilizing. So while the external problem of inflation opened the door for the *laissez-faire* models to receive a new hearing by macro-economists, it remains unclear whether the mass of economists chose the new classical model over others on the basis of ideological preferences or theoretical developments. Did Lucas, as he and his associates claimed, convince the majority of macro-economists to adopt their analytic framework, because it represented a more rigorous explanation of inflation, or because the policy implications of the model were more congenial to their *laissez-faire* sentiments? And if macro-economists chose the new classical model because it demonstrated the efficacy of their preferred policy of *laissez-faire*, why did they not chose the theories developed by Buchanan or Friedman?

To answer these questions we must return to our investigation of the evolution in attitudes toward *laissez-faire*. We have discovered that Knight, Simons and Hayek developed theoretical cases for *laissez-faire* that incorporated the effect of the imperfections of knowledge as individuals made decisions crucial in determining the productivity of the economic organization. Knight had applied the notion of change that he had developed in his philosophical studies to his examination of economic phenomena. This application led him to separate determinate risk from indeterminate uncertainty, and, in the process, Knight

introduced a theoretical innovation into neoclassical economics – the formation of expectations became an endogenous variable in the dynamic model of competition, and expectations formed in situations characterized by uncertainty became indeterminate and, therefore, unquantifiable, precluding a unique solution to the model. Ultimately, Knight drew on this *theoretical development* to recommend that a laissez-faire framework of rules, developed in free discussion, represented the better way to organize economic activity in a world of uncertainty.

Simons did build on Knight's notion of uncertainty to fashion part of his theoretical case for laissez-faire. To Simons, the presence of Knightian uncertainty indicated that policymakers should implement rules in the monetary arena to insure that the government controlled the supply of money in a predictable manner. But even more important to the theoretical case developed by Simons was the cartel model of imperfect competition that underpinned his recommendations of more interventionist policies to promote price flexibility in product and labor markets.

Hayek characterized his view of imperfect knowledge as one of the basic facts from which social science started – because concrete knowledge was dispersed and incomplete in the minds of many individuals the analyst needed to investigate the actions, intentions or opinions of individuals as they engaged in economic activity. Hayek's judgment that this type of analysis was appropriate for situations in which knowledge was imperfect merely represented an extension to new areas of investigation of the Austrian method of subjectivism and methodological individualism that he had borrowed from his teachers Wieser and Mises. Thus his case for laissez-faire, like that of his intellectual elders, stood or fell in relation to acceptance of the Austrian method of methodological individualism and subjectivism. And by postulating a one-way causality from the individual to society as the way to explain economic activity, Austrian economists limited the avenues for rationalizing interventionist policies within the context of economic theory.

By the 1940s orthodox economists were in the process of exchanging the pluralism of interwar economics with the uniformity of postwar neoclassicism. As they increasingly incorporated positivistic and quantitative methods of analysis into their work, the theoretical cases for laissez-faire developed by Knight, Simons and Hayek inevitably became less convincing. Yet while Knight, Simons and Hayek were increasingly unsuccessful in persuading economists of the theoretical significance of their cases for laissez-faire, they were quite effective in convincing

young scholars like Friedman and Buchanan of the virtues of a classical liberal society organized with the principle of *laissez-faire*. At the University of Chicago, Knight played a decisive role. In the 1920s and 1930s, he inspired the development of an affinity group that included Simons and Friedman. In the 1940s, before the workshop model was fully ensconced at Chicago, a place still existed in the graduate curriculum for Knight's ideas to transform Buchanan into a market libertarian. In addition, he helped to create the Committee on Social Thought that eventually hosted Hayek and provided him with a venue at Chicago to debate his ideas. Yet even with his ability to inspire young economists to see the virtues of classical liberalism and *laissez-faire*, Knight never seemed to inhibit them from developing the new ideas or taking on alternative professional roles. The opportunity of Simons, Friedman and Buchanan to move in different intellectual directions ultimately brought both them and the maxim of *laissez-faire* the attention necessary to nurture its revival.

Also crucial in terms of the revival of *laissez-faire* was Hayek's decision to follow through on Simons's idea of establishing an organization to promote the political philosophy of classical liberalism by founding the Mont Pelerin Society. Clearly the social relations promoted by this organization were important to both Friedman and Buchanan and to the revival of *laissez-faire*. For it provided them a place to escape from their feelings as beleaguered outsiders in the academy with gatherings that their fellow member R.W. Hartwell later described as 'provid[ing] information, reassurance, comfort, and camaraderie to individual liberals at a time they were few in number and geographically isolated, thus strengthening their beliefs and resolve' (Hartwell 1995, p. 202). While Friedman's fundamental attraction to classical liberalism manifested itself slowly in his theoretical work, it was at the inaugural meeting of the Mont Pelerin Society that his developing interest in political philosophy was strengthened. In the end, his resolve to disseminate classical liberalism led him to take on Simons's role as public advocate. With the publication of *Capitalism and Freedom* he created his own version of the 'Positive Program' and ultimately became an even more successful advocate than Simons. He advised presidents and presidential candidates. And he wrote for the popular press and took advantage of the new medium of television. All of these activities served to keep the ideal of *laissez-faire* in the public mindset, even as policymakers were declaring a premature victory for Keynesian policy prescriptions.

In contrast, Buchanan, who was converted almost overnight to the

virtues of classical liberalism by the teachings of Knight, eschewed opportunities to advise politicians and to teach the public. Rather his resolve to spread the ideas of liberalism manifested itself in taking on Knight's role of dispassionate intellectual, and he confined his advocacy to 'words that enter arguments presented in books, essays, and lectures, arguments that develop quasi-abstract ideas which challenge the minds of those who are members of the academies' (Buchanan 1989, p. 173). Early on he tried out his arguments by presenting papers to members of the Mont Pelerin Society. Beginning in the late 1950s, concerned that economics 'was shifting away from its classical foundations as a component element in a comprehensive moral philosophy, and that technique was replacing substance', he established several academic institutions in which he, colleagues and graduate students found both the ideas and the support to develop public choice theory (Buchanan 1992b, p. 94). As his receipt of the Nobel Prize attests, members of the academic community did take his ideas seriously, and, in the process, he most certainly forced some to consider the implications of his analysis for laissez-faire systems of rules.

After World War II, both Friedman and Buchanan became alarmed by the *external events* that suggested Hayek's warnings about the 'road to serfdom' were coming true in the United States. In response they developed new theoretical cases for laissez-faire that were intended to meet the modern, positive standards of postwar neoclassicism. Unfortunately, neither analyst accomplished that objective. In Friedman's case, many economists did not accept the empirical tests he and others offered as proof of validity of the monetarist model and its concomitant recommendation of a money growth rule. Further Friedman certainly weakened his claims for the optimality of the money growth rule when he was forced to acknowledge that this policy's efficacy was not based on the implications of the monetarist model, but rather on his contention that the unpredictability of lag effects prevented policymakers from conducting effective discretionary policy and on his testimony that stable rules were congenial to his ideological premises favoring limited government involvement in the economy. In Buchanan's case, he offered the positive hypothesis that the combination of Keynesian policy prescriptions and political agents motivated by self-interest stimulated deficits and inflation, and expanded public provision of goods and services. The implication of this analysis was that voters needed to modify the existing framework of rules, preferably with a balanced budget amendment. Like Hayek, Buchanan's preference for models founded on methodological

individualism, subjectivist economics and positive political economy reduced the possibility for rationalizing interventionist policies within the context of economic theory. And even Buchanan, late in his career, has recognized that his ideological commitment to market libertarianism had the potential to influence the choice of problems he tried to solve and methods he used to study them.

By the time that Lucas began graduate studies at Chicago in the early 1960s, Knight had retired and both the method of teaching and the lessons taught had changed markedly. In developing his case for *laissez-faire*, Lucas was not alarmed as Friedman and Buchanan had been by an external social problem. Rather he was troubled by inconsistencies in the Keynesian theoretical apparatus. In response he worked from the base of theories, empirical relations and policy recommendations offered by Friedman to develop a more rigorous model of the macro-economy, an approach to analysis that he learned by reading Keynesian Paul Samuelson. Thus, when placing Lucas's analysis side-by-side with that of Friedman and Buchanan, it is not surprising that the majority of macro-economists would find it a more acceptable alternative. Because on the surface, it removed much of the taint of the ideological commitment to *laissez-faire* traditionally associated with the members of the Chicago School and adherents of public choice theory. In addition, in many ways its structure looked like what all young macroeconomists had learned in graduate school.

And it was because the new classical model appeared as if it embodied major *theoretical developments* that the majority of macro-economists chose it to replace Keynesian theory as their standard framework of analysis. Of all the alternative explanations of inflation available to macro-economists in the 1970s, new classical theory clearly exemplified the most advanced use of techniques that macro-economists have been developing during the years of postwar neoclassicism. For example, Lucas's adoption of the rational expectations hypothesis merely extended the rationality postulate to the analysis of the formation of expectations. His adoption of the contingent claims equilibrium allowed him to take a general equilibrium approach to the consideration of macroeconomic phenomena, a modeling choice that represented a logical extension of the microfoundations research initiated by the Keynesian economists. His rigorous mathematical format exemplified a further development of the patterns of model building started in earnest by the Keynesian economists among others at places like the Cowles Commission. And while many older Keynesian economists like Tobin

became engaged in strident debates regarding the unrealistic assumption of rational expectations and market clearing (Tobin 1980, pp. 20–48), younger economists trained in Friedman's methodology of positive economics realized the true test of a theory was the conformity of its outcomes, not its initial assumptions, with reality. Thus in many respects new classical theory provided the best logical extension of the modeling techniques that many economists had been taught by both teachers and colleagues as those to emulate when undertaking theoretical research. In addition, due to the technical skills required to extend the new classical model, by adopting it many young economists discovered a means to advance their professional prestige more quickly.³

By the early 1980s, while economists no longer considered the rational expectations hypothesis controversial, they had 'widely abandoned' Lucas's monetary surprise model of new classical macroeconomics (Mankiw 1990, p. 1653). Macroeconomists began building analogue economies that depicted real business cycles caused by supply-side shocks due to changes in the rate of technical progress; these models suggested that monetary policy was irrelevant.⁴ New Keynesian economists were constructing models depicting business cycles using assumptions about sticky nominal wages,⁵ menu prices⁶ and real wage stickiness;⁷ the implications of these models suggested a role for discretionary policy. As a result, the era of the supremacy of models recommending laissez-faire was shortlived. While most economists no longer recommended Keynesian fine-tuning, a spirited debate between proponents of laissez-faire rules versus discretion continues.

What lessons can be learned from this episode in the evolution of economic analysis? First, it demonstrates the crucial role played by a community of scholars in sustaining an idea over time. By the end of the 1940s, most economists and policymakers had moved away from advocacy of the principle of laissez-faire towards the standard of a managed economy. In the meantime, the activities of early pioneers Knight, Simons and Hayek had created a supportive community for dissenters like Friedman and Buchanan to explore the political philosophy of classical liberalism. The existence of that community insured that a new cohort of scholars continued to think *and* teach about the principle of laissez-faire and its relation to the new methods of theorizing after World War II, when most economists believed that line of inquiry was outmoded. As a result, when the Keynesian consensus began to disintegrate in the 1970s, Friedman and Buchanan already had available for reassessment highly

developed theories that recommended the superiority of rules over discretion. Likewise, as might be expected from one trained in the community of Chicago economists, Lucas had internalized norms about market-clearing, individual optimization, limited government, and controversial methods of analysis. Thus, it was not surprising that his new theory of inflation aimed to

make more explicit the implicit model underlying the policy proposals of Henry Simons, Milton Friedman, and other critics of activist aggregative policy . . . [by providing] an equilibrium account of business cycles, one [that] accepts in *in advance* rather severe limitations on the scope of governmental countercyclical policy which might be rationalized by theory. (Lucas 1977, p. 234)

Second, and more importantly, while asserting that the majority of macro-economists chose the new classical model due to the *theoretical developments* it embodied, we cannot assume that this model remains untainted by any ideological sentiments. For when developing this model, Lucas uncritically accepted Friedman's method of positive economics, his interpretation of the natural rate hypothesis and the empirical relations he developed with Anna Schwartz in their investigation of the monetary history of the United States. Our investigation has revealed that the tools Lucas borrowed from Friedman clearly were influenced by Friedman's ideological commitment to *laissez-faire*. Thus, while it is mistaken to suggest that macro-economists chose the new classical model because they were influenced in their decision by the general move to conservatism in the 1970s, it is appropriate to worry about the effect of ideological influences on the new classical model. For while Lucas was extremely adept at using sophisticated techniques of analysis, he was also uncritical regarding the origin of his tools. Thus, as economists establish technical sophistication as the criterion for selection among competing theories, it appears on the surface that they have removed the effect of ideology on economic theory from the process of theory development. Yet as economists uncritically employ borrowed tools, ideological influences re-enter analysis on the ground floor, whether they accept as valid the theories, empirical relationships and policy pronouncements of Friedman, as Lucas has done, or whether they accept as valid the proposition that observed economic problems are due to factors external to the free enterprise system as all neoclassical economists have done.

NOTES

1. Snowdon and Vane also highlight the crucial importance of the 1970s acceleration in inflation and stagflation providing an avenue for Friedman and Lucas to gain serious consideration of their anti-Keynesian ideas (Snowdon and Vane, 1999, pp. 5–7). They do not mention the work of Buchanan and Wagner, though they do provide an extended discussion of the political business cycle literature.
2. It should be noted that during this period there existed, in addition to the Keynesian analysis, theoretical explanations of inflation that suggested the optimality of public intervention in the economy for dealing with this social problem. Paul Davidson focused on the presence of fundamental uncertainty, a crucial aspect of Keynes's analysis, which he believed orthodox Keynesian economists had neglected. He attributed accelerated rates of inflation to the impact of uncertainty on individuals as they formed expectations underlying their wage demands in the volatile economic environment of the early 1970s (Davidson 1978). Sidney Weintraub, another post-Keynesian economist, focused on rising wage costs as the explanation for the accelerated rates of inflation. He recommended the institution of incomes policies to halt the increased rates of inflation (Weintraub 1971).
3. Harry G. Johnson described the Keynesian revolution in similar terms. He said it appealed to the younger economists due to 'the opportunity it offered to bypass the system of academic superiority by challenging their senior colleagues with a new and self-announcedly superior scientific approach' (Johnson 1971, p. 57). David Colander has argued that part of the success of new classical economics was due to the numerous dissertation topics it suggested (1988).
4. Seminal papers included F.E. Kydland and Prescott (1982) and J.B. Long and C.I. Plosser (1983). Prescott worked with Lucas at Carnegie-Mellon.
5. Seminal papers include Stanley Fischer (1977), and John Taylor (1980).
6. Seminal papers include Mankiw (1985) and George Akerloff and Janet Yellen (1985).
7. Seminal papers include Yellen (1984) and Laurence Ball and David Romer (1990).

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