ISRAEL M. KIRZNER

64

HOW MARKETS WORK

Disequilibrium, Entrepreneurship and Discovery

occasional papers

INSTITUTE FOR HUMANE STUDIES

The Centre for Independent Studies is a non-profit, private sector policy research institute. Its major concern is with the principles and conditions underlying a free and open society. The Centre's activities cover a wide variety of areas dealing broadly with social and economic policy. It emphasises the role of markets and other voluntary processes in providing many of the goods and services normally supplied by the compulsory methods of government.

The Centre meets the need for informed debate on issues of importance to a free and democratic society in which individuals and business flourish, unhindered by government intervention. In encouraging competition in ideas, The Centre for Independent Studies carries out an activities program which includes:

- research
- holding lectures, seminars and policy forums
- publishing books and papers
- issuing a quarterly journal, *Policy*

For more information, see the inside back cover.

PO Box 92 St Leonards 1590 Australia
Phone: (02) 9438 4377 • Fax: (02) 9439 7310
World Wide Web: http://www.cis.org.au

PO Box 5529, Lambton Quay, 3785, New Zealand
Telephone: (04) 499 5861 Fax: (04) 499 5940

How Markets Work

Disequilibrium, Entrepreneurship and Discovery

Israel M. Kirzner

Occasional Paper 64

THE CENTRE FOR
INDEPENDENT
STUDIES

How Markets Work

Disequilibrium, Entrepreneurship and Discovery

Israel M. Kirzner
Professor of Economics
New York University

Occasional Paper 64

THE CENTRE FOR
INDEPENDENT
STUDIES

1998

Published June 1998 by

The Centre for Independent Studies Limited.

National Library of Australia

Cataloguing-in-Publication Data:

Kirzner, Israel M. (Israel Mayer), 1930- .
How markets work : disequilibrium, entrepreneurship and discovery.

Includes bibliography.
ISBN 1 86432 035 8.

1. Equilibrium (Economics). 2. Entrepreneurship. 3. Markets. 4. Value. I Centre for Independent Studies (Australia). II. Title. (Series : CIS occasional papers ; 64).

330.122

First published in June 1997 by
The Institute of Economic Affairs
2 Lord North Street
Westminster
London SW1P 3LB
Reprinted by permission.

Layout and design by Daryl-Anne Le Roux.
Printed by Merino Lithographics, Moorooka, Queensland.
Typeset in Garamond 10pt.

Contents

Key Points

- Mainstream neoclassical economics focuses on already attained states of equilibrium. It is silent about the processes of adjustment to equilibrium.
- Human action consists of '... grappling with an essentially unknown future', whereas mainstream theory assumes we are confronted with clearly specified objectives, known resources and defined courses of action.
- Critics of the market economy find ammunition in neoclassical theory, since in the real world markets always fall short of the perfectly competitive model.
- The 'Austrian' theory of entrepreneurial discovery allows economists to escape from the analytical box in which 'choice' simply consists of computing a solution implicit in given data.
- An entrepreneurial act of discovery consists of realising the existence of market value that has hitherto been overlooked. Scope for entrepreneurial discovery occurs in a world of disequilibrium that is quite different from the equilibrium world of mainstream economics.
- Entrepreneurial discovery explains why one price tends to prevail in a market. Though new causes of price differences continually appear, entrepreneurs exploit the resulting profit opportunities and produce a tendency towards a single price.
- Only with the introduction of entrepreneurship is it possible to appreciate how markets work. Without entrepreneurship, there would be no market co-ordination.
- So-called 'imperfections' of competition are often '...crucial elements in the market process of discovery and correction of earlier entrepreneurial errors'.
- Advertising expenditures, for example, are means of alerting consumers to new information. Anti-trust laws may hamper competition by blocking entrepreneurial alertness to profits in, for example, grasping economies of scale through mergers.
- Entrepreneurial profit, far from generating injustice, is a 'created gain'. It is not '... sliced from a pre-existing pie ... it is a portion which has been created in the very act of grasping it'.

Foreword

In 1984 Professor Israel Kirzner delivered the inaugural John Bonython Lecture for the Centre for Independent Studies. Speaking on 'The Role of the Entrepreneur in the Economic System,' he argued for the importance of entrepreneurial activity in driving a market economy and serving the public interest.

Fourteen years later, that role is still inadequately appreciated. Microeconomic thinking is still dominated, as it has been for most of this century, by the neoclassical school. Economists have resorted to increasingly complex models that emphasise the end-state of competitive equilibrium, with momentous consequences for economic policy.

Concentration on the equilibrium state of 'perfect competition' leads to a search for 'imperfections' and 'failures' in markets, and it is a short step to proposals for government action to correct such failures. Indeed, since all real-world markets must appear imperfect compared to the perfectly competitive ideal, the scope for government intervention is virtually unlimited.

Criticisms of the market failure approach to policy making have, however, mounted: notably those made by the public choice school, which points out that people in the state sector are neither omniscient nor altruistic but just like other people. Consequently, government fails too, and it cannot reasonably be assumed that action to remedy market failures will necessarily be beneficial.

Even more damaging to the neoclassical mainstream, perhaps, is the criticism that competition should be seen not as a state but as a continuous process taking place over time. This view is often labelled 'Austrian,' and is associated particularly with two great twentieth century economists – Ludwig von Mises and Friedrich Hayek. According to the Austrians, the long-run equilibrium of perfect competition is not an appropriate policy target but rather a theoretical end-state in which competition has been exhausted. The essence of competition is disequilibrium, characterised by continuous change.

In this paper Professor Kirzner, who is one of the leading modern exponents of the Austrian tradition, shows how Austrian economics relates to the older classical tradition and how it diverges from the mainstream. He explains how entrepreneurial discovery is at the centre of the real-world market process. Knowledge is *not* perfect, nor is it available from some central pool that can be tapped: it is naturally

dispersed and is uncovered by entrepreneurs competing with one another to find better ways of satisfying consumers.

Not only does Professor Kirzner explain the principal features of Austrian economics, he also discusses the insights it offers into practical policy issues such as advertising and competition policy. As for *justice*, Professor Kirzner maintains that there is nothing unjust about pure profits accruing to entrepreneurs: such profits are 'created gain,' not a portion of some already existing 'pie'.

Interest in the Austrian view of economics is growing, and references to Austrian economics now appear even in introductory economics texts. Microeconomic policies, however, with their emphasis on supposed market failures, still seem biased towards the views of 'defunct economists' (to use the words of Keynes).

The CIS is grateful to the Institute of Economic Affairs for permission to reprint this lucid statement of the Austrian position, and believes that Professor Kirzner's views will make a timely and important contribution to economic debate.

Greg Lindsay
Executive Director

ABOUT THE AUTHOR

Israel M. Kirzner received his Bachelor's degree at Brooklyn College, Brooklyn, NY, and his Master's and Doctoral degrees at New York University (where he studied under the late Ludwig von Mises). Since 1957 he has been a Faculty member at New York University, holding the title of Professor of Economics since 1968.

Professor Kirzner's published works include *The Economic Point of View* (1960), *Competition and Entrepreneurship* (1973), *The Meaning of the Market Process* (1992), and 'Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach,' *Journal of Economic Literature*, March 1997. He delivered the inaugural John Bonython Lecture in 1984, published by the CIS as *The Role of the Entrepreneur in the Economic System* (Occasional Paper No. 10).

I. INTRODUCTION

This paper presents, in non-technical terms, an 'Austrian' view of how a market economy works. The theory is 'Austrian' in its being derived from insights which matured during the course of the century and a quarter history of the Austrian tradition. These insights came to be articulated with especial clarity and with originality of emphasis in the mid-twentieth-century contributions, respectively, of two great exponents of the Austrian tradition, Ludwig von Mises and Friedrich Hayek. During the past quarter of a century a number of younger economists working in the Austrian tradition, including the present writer, have contributed to the further crystallisation of the theory of entrepreneurial discovery and its implications for economic understanding and policy.

Most economists agree that markets 'work' – that, through voluntary exchange transactions, agents in a market economy are, without central direction or control, able to participate in an enormously productive system, taking advantage of specialisation and division of labour. Moreover, economists generally agree that the overall social pattern of resource allocation spontaneously so achieved is highly and benignly sensitive to changes in consumer preferences, resource endowment availabilities and known technological possibilities.

These shared doctrines enable economists to understand both the dramatic increase in the standard of living achieved in market societies during the past century and the relative failures (and the recent numerous examples of complete breakdown) of socialist economies, whether in Eastern Europe or elsewhere. Yet there remains a fundamental mystery at the heart of these shared doctrines. Surprisingly, standard economics does not provide a satisfying explanation of exactly *why* and *how* markets work. Adam Smith's 'invisible hand' turns out to be an apt metaphor for what remains an analytical black box in economic theory. Economic theory, at least in its mainstream version, explains with great sophistication the operation of a smoothly working market economy in which each agent has somehow already found his place. But it turns out to be virtually silent in explaining the course of events which enables agents, starting from initial absence of co-ordination, *to find* their places in the social jigsaw puzzle. So the relatively smooth working of real-world markets remains, after all, a

mystery.

It is not the primary purpose of this paper to demolish mainstream economics. Mainstream theory has limited usefulness for a number of workaday purposes of economics. The paper's objective is to set forth an alternative 'Austrian' theoretical approach, grounded in the economics of entrepreneurial discovery, to explain a mystery left unresolved by mainstream theory – how and why markets work. Criticisms of mainstream theory are developed briefly in section III of the paper, with the aim of highlighting the crucial features of the Austrian approach.

When economists, Austrian or not, talk of markets 'working', they have in mind processes of social adjustment in which market participants are spontaneously attracted to offer their fellows exchange opportunities which tend in aggregate to exhaust all potential gains from trade throughout the economy. At first glance such a tendency appears counter-intuitive. For individual activities to become dovetailed in such a benign fashion one would expect a virtually omniscient, omnipotent and benevolent economic czar to survey all individual preferences, endowments and potentialities; he would then compute and enforce a pattern of decision-making that not only co-ordinates all decisions, but also ensures that no opportunities for mutual gain remain unexploited.

Yet the theory of the market claims not only that it is *possible* for a set of decentralised individual decisions to exist on the pattern of the fully co-ordinated state of affairs. It claims also that there is a powerful tendency for market events spontaneously to unfold toward such a fully co-ordinated pattern without any central direction and control. The absence, in mainstream economics, of a satisfying explanation for the validity of such claims, is a troubling hiatus. The Austrian theory of entrepreneurial discovery outlined in this paper aims to fill this gap. But the implications of the theory go much further.

The set of assumptions required by mainstream theory to demonstrate how a smoothly operating market might work are far too demanding in terms of the economic systems we know. The empirical unrealism of that theory's assumptions suggests that it conclusively demonstrates that real-world markets should *not* be able to spontaneously co-ordinate. Thus the obvious co-ordinating properties of real-world markets turn out to be counter-intuitive phenomena crying out even more desperately for an explanation.

Austrian theory, as presented here, places great weight on 'entrepreneurial discovery', which enables decentralised decision-makers to

recognise when present decisions can be improved upon, and to anticipate future changes in the decisions being made by others. Movements in prices, production methods, choices of outputs, and resource owner incomes generated by entrepreneurial discovery tend to reveal where current allocation patterns are faulty, and to stimulate changes in the corrective direction. The paper contrasts the element of entrepreneurial discovery that is central to the Austrian theory with the character of the individual economic decision as it enters into mainstream theory.

It turns out that not only does entrepreneurial discovery theory provide the key to explaining how markets work, on lines foreign to the approach taken by mainstream theory. In addition, its implications for economic policy are at sharp variance with those conventionally held. Even if one's scientific curiosity as to how the market works were somehow to be suspended, attention to Austrian theory would be required in order to choose intelligently among alternative policy options with different consequences for social well-being. In such areas as anti-trust policy, in particular, Austrian theory suggests policies differing drastically from those conventionally derived from mainstream theory.

Section II of this paper sketches the background, in twentieth-century economics, of the theory of entrepreneurial discovery. Section III briefly examines the mainstream understanding of markets, emphasising those features to which the Austrian theory takes sharp exception. Section IV develops the Austrian theory in positive fashion. Section V discusses the implications of the Austrian theory that differ from those traditionally drawn from mainstream economics. Section VI concludes the paper.

II. THE BACKGROUND IN THE HISTORY OF ECONOMIC IDEAS

The Emergence of Neo-classical Theory

Beginning with the 1870s, there emerged a body of economic doctrines broadly shared by the various schools of economic theory in Europe. Whether under the aegis of the Marshallian school in England, the Mengerian school in Austria, or the then emerging Walrasian tradition on the Continent, up to the 1930s economics came to emphasise the theory of price, held to co-ordinate the decisions of suppliers and demanders. These different schools of thought are often described as making up a single, broadly understood 'neo-classical' approach to economic theory.[1]

A central tenet of this neo-classical theory was that price tended toward the market-clearing level in each market. In terms of the simple supply and demand diagram (still taught today to all students beginning economics) this came to mean that prices too high to clear the market tend to fall (due to the competition of sellers trying to sell their unsold surplus); prices too low to clear the market tend to rise (due to the competition of eager, disappointed buyers). These regularities governing price movements provided economists with an insight into markets which appeared perfectly general, applying to all kinds of goods and services and showing how market phenomena systematically express the preferences of market participants. All these neo-classical schools shared the view that it was scientifically fruitful, in examining different kinds of markets, to abstract from the institutional detail, and to focus upon their pure 'economic' structure – an analytical structure from which everything but supply, demand, and price had been stripped away. This aspect of neo-classical economics was successful in pushing the once dominant German Historical School of Economics – with its anti-theoretical bent – from its turn-of-the-century pre-eminence on the Continent.

The awareness by the various theoretical schools of their shared opposition to the German Historical School seems to have misled them

[1] In regard to late twentieth-century economics, the term 'neo-classical' has come to be specifically attached to a much narrower set of theories reflecting a rigorous extension of Walrasian general equilibrium theory, in which the market is seen as made up of perfectly co-ordinated decisions of strictly maximising individuals.

into overlooking subtle developing analytical and methodological differences that would subsequently lead into sharply divergent theoretical paths. Indeed, the shared neo-classical theory of price formation came to be developed along sharply different lines. The mainstream (narrowly 'neo-classical') approach emerged out of the confluence of the Marshallian and Walrasian traditions. In this approach the focus was placed upon the conditions of market equilibrium seen, in Walrasian fashion, as the expression of the solution to the simultaneous equation system constituted by the relevant supply and demand functions. This diverted analytical attention from the step-by-step process through which one might imagine initially dis-co-ordinated sets of decisions gradually becoming modified towards greater mutual co-ordination. Hence the 'mystery' to which we have drawn attention: mainstream theory fails to explain how markets do in fact *come* to work. It explains in great detail the relationships that would prevail in markets that already do work; it is silent on the nature of the processes that might generate those relationships.

Mengerian and Walrasian Traditions

But the third doctrinal component of the earlier neo-classical alliance of schools came to develop a different understanding of the theory of price. The Mengerian tradition gradually evolved until, at about the middle of this century, it was set firmly in a direction explicitly divergent from the Walrasian. It recognised that the mathematical refinements occurring in mainstream theory had been won at the cost of obscuring key features of the earlier neo-classical understanding. As explained below, both Ludwig von Mises and Friedrich Hayek articulated such views in the 1940s.

These contributions by Mises and by Hayek emerged out of an earlier Austrian tradition that had taken the shared neo-classical theory of price for granted. A prescient paper by Austrian economist Hans Mayer had pointed to key problems in the emerging Marshallian-Walrasian synthesis (Mayer 1932/1994: 55-168). But as late as 1952 Mises himself (celebrating the definitive burial of the German Historical School) asserted that what separated the 'modern' schools of economic theory from one another was largely nothing more than a matter of language and style (1932/1960: 214).

The Role of Robbins

That the Austrians of the 1920s indeed saw their economics as entirely compatible with the British (Marshallian) mainstream, is well illustrated

by the role played by Lionel Robbins. Robbins, who emerged as an intellectual leader in the teaching of economics at the London School of Economics at a young age, came to be profoundly influenced by the vibrant Austrian tradition pulsating in the Vienna seminars at the end of the 1920s. His celebrated 1932 book, *The Nature and Significance of Economic Science*, was written, at least in part, to introduce British economists to a number of the fundamental Austrian insights which Robbins (who read German) had absorbed during his visits to Vienna and from the Austrian literature (which he cites freely throughout his book). In his preface, Robbins acknowledges, in particular, his intellectual indebtedness to Mises.

Yet Robbins did not see himself as calling for any important modification of the substance of British economics; as explained in his preface, he saw his book as simply introducing British economists to a fresh way of understanding the foundations of *their own* economics. The price theory that Robbins found in Vienna was not seen as antithetical to the theory which developed into the orthodox theory of price to be taught in countless college classes in Britain and in the USA over the rest of the century.

The Socialist Calculation Debate

It was the celebrated interwar debate on the possibility of socialist economic calculation which appears to have jolted Mises and Hayek into recognising that the differences between an Austrian theory of price and a Marshallian-Walrasian theory went far beyond matters of language and style. In 1920 Mises had pointed out that central planners under socialism, lacking the guidance provided by market prices for resources, would be unable to plan socialist production projects so as to take into account the comparative importance of competing projects. This challenge set off a wave of contributions by defenders of the possibility of efficient socialist planning. Hayek contributed a number of papers during the 1930s assessing these contributions, and demonstrating that the Misesian critique of socialist efficiency had not, after all, been adequately addressed.

Best known among the socialist contributions were papers by Oskar Lange (1938) and by Abba P. Lerner (1936, 1937) which suggested that central planners could arbitrarily announce 'prices' for resources, and instruct socialist production managers to use these resource prices in making their own respective production plans. Resulting resource surpluses (or shortages) would then indicate to the central planners the need to adjust resource prices downwards (or

upwards). In developing such schemes, Lange and Lerner professed simply to be transferring to the socialist model the insights concerning the nature and function of resource prices they had learnt from the theory of price in the market economy.

This use of standard price theory made Mises and Hayek realise *their* understanding of the nature of market prices makes these prices utterly incapable of serving as a model for the purposes envisaged by Lange and by Lerner. In reaction to these developments in the socialist economic calculation debate, Mises wrote his magnum opus, *Human Action* (1949). Hayek responded to the calculation debate by writing a remarkable series of papers, which he collected together and republished in his 1948 *Individualism and Economic Order*. There were significant differences in the ways in which Mises and Hayek respectively identified the essence of their understanding of the theory of price, as distinct from that of mainstream theory.

Mises and Entrepreneurial Action

Mises emphasised the dynamic character of the market process, driven by a profit-seeking entrepreneurial vision of future conditions in a radically uncertain world. 'The driving force of the market process is provided ... by the promoting and speculating entrepreneurs ... Profit-seeking speculation is the driving force of production.' (1949: 326-26). The equilibration process, which mainstream theory somehow believed to be instantaneously achieved, consisted of such entrepreneurial speculative activity. 'The activities of the entrepreneur are the element that would bring about the unrealisable state of the evenly rotating economy if no further changes were to occur.' (1949: 335).

For Mises, the important point to be observed concerning the equilibrium state is that in 'the imaginary construction of the evenly rotating economy there is no room left for entrepreneurial activity ...' (1949: 253). His title, *Human Action*, reflects his emphasis not on the colourless constrained-maximising decision of mainstream equilibrium theory, but on the actions of purposeful human beings in an uncertain world, who are called upon to exercise their entrepreneurial judgement in making their way in such a world. 'Action is always speculation ... In any real and living economy every actor is always an entrepreneur and speculator.' (1949: 253). A science of 'human action' must be a science of the equilibrative properties of entrepreneur-driven market processes. An economics seen as such a science of human action is distinguished sharply from the mainstream theory of price confined to an analysis of the conditions under which a market, or a market

economy, can be pronounced to be in equilibrium.

Hayek and the Market Process

Hayek, on the other hand, did not explicitly draw attention to the role of entrepreneurial dynamism and speculative drive in the operation of the market process. Instead, in his papers collected in *Individualism and Economic Order*, Hayek explored the ways in which the market process made market participants aware of each other's attitudes and prospective plans. A state of equilibrium, Hayek pointed out, is one in which market participants have somehow come to expect, on the part of other participants, precisely those plans to be made which do in fact turn out to be made. All plans are made in the correct expectation of the corresponding plans being made by others. No one's plan is frustrated on account of others failing to act as that plan had anticipated they would act. No realised plan is regretted as having failed to make use of opportunities, made possible by the actions of others, which hindsight reveals but which foresight failed to anticipate. In Hayek's own words of 1937,

> the concept of equilibrium merely means that the foresight of the different members of the society is ... correct in the sense that every person's plan is based on the expectation of just those actions of other people which those people intend to perform and that all these plans are based on the expectation of the same set of external facts, so that under certain conditions nobody will have any reason to change his plans. (1949: 42)

With this profoundly important insight into the state of market equilibrium as consisting in a pattern of mutually sustaining expectations, Hayek identified the crucial ingredients necessary for an equilibrating process to be set in motion. Such a process, Hayek pointed out, must consist in mutual learning, during which market participants come to acquire more and more accurate mutual knowledge concerning what one's fellow participants are able (and in fact plan) to do:

> 'In the light of our analysis of the meaning of a state of equilibrium...the real content of the assertion that a tendency toward equilibrium exists ... can hardly mean anything but that, under certain conditions ,... the expectations of the people and particularly of the entrepreneurs will become more and more correct. (1949: 45)

In standard price theory, Hayek claimed,

> it is generally made to appear as if these questions of how

> the equilibrium comes about were solved. But, if we look closer, it soon becomes evident that these apparent demonstrations amount to no more than the apparent proof of what is already assumed. The device generally adopted for this purpose is the assumption of a perfect market where every event becomes known instantaneously to every member. (1949: 45)

In subsequent papers expanding on his insights into the role of ignorance and knowledge in explaining the market process, Hayek rejects, explicitly or implicitly, much of the core of mainstream theorising about the process of equilibration, the meaning of competition, and the criteria relevant in making judgements about the well-being of society.

Mises and Hayek: Differences and Similarities

In terms of the positive theory of entrepreneurial discovery, the differences between Mises's understanding of the dynamic market process and Hayek's understanding of that same process, are less important than the congruence of these two ways of understanding markets. It is true that Mises did not draw special attention to the mutual learning that must occur during the entrepreneurially-driven process of equilibration. Nor did Hayek emphasise the speculative, entrepreneurial character of the market process. But as section IV explains, these two ways of articulating a theory of market process turn out to be two sides of the same coin. Moreover, in drawing attention to these complementary sets of insights, Mises and Hayek were explicitly detaching Austrian economics from the mainstream consensus in price theory. They were, indeed, breaking away from the mainstream paradigm, as it was coming to be understood by the middle of the twentieth century, and moving towards the creation of a new, 'Austrian', paradigm.

The New Austrian Paradigm

Why had this new 'Austrian' paradigm not been articulated earlier? A plausible explanation is that the mainstream paradigm had itself been gradually undergoing modification (particularly under the impact of the Walrasian approach) in the decades immediately following 1930. Earlier neo-classical thinking had *not*, in fact, confined price theory to the analysis of perfectly competitive equilibrium under conditions of perfect knowledge.[2] The great twentieth-century Austrians, Mises and

[2] Machovec (1995), where this thesis is convincingly developed in great detail.

Hayek, gradually realised the direction in which mainstream price theory was moving. The crystallisation of mainstream theory into an approach confined to analysis of equilibrium conditions under the assumption of perfect knowledge made it both possible and necessary for the Austrians to articulate, for themselves and others, their own approach.

By mid-century the Austrian tradition – at a time when conventional histories of economic thought were pronouncing that tradition to be in permanent eclipse – had produced at least the elements of a new analytical framework within which to understand price-formation, market processes, and the role of equilibrium analysis.

Subsequent developments in the history of Austrian economics during the second half of the twentieth-century continued this gradual liberation from the mainstream approach. The theory of entrepreneurial discovery (section IV below) offers a synthesis of Misesian and Hayekian insights which places the Austrian understanding of the market process in an entirely different framework from that of contemporary mainstream micro-economic theory. This Austrian framework, unlike the mainstream theory, offers a satisfying explanation of how and why markets work.

Before presenting the theory of entrepreneurial discovery, however, it is necessary to draw attention in more detail to weaknesses in the mainstream approach which have moved contemporary Austrians to embrace the Mises-Hayek paradigm.

III. PROBLEMS IN THE STANDARD THEORY OF PRICE

Textbook Competitive Price Theory

The core of the standard theory of competitive price as taught in textbooks for the last half century can be presented in the following simplified form:[5]

- the competitive market system ensures instantaneous or rapid attainment, for a given good or service, of the market-clearing price (that marked out by the intersection of the relevant Marshallian supply and demand curves);
- the competitive market system instantaneously or rapidly achieves those adjustments between markets needed to ensure that the market-clearing price is simultaneously attained in *each* market throughout the system; and
- to satisfy the conditions needed to sustain this theory an economy must, at all times, be imagined to display the characteristics of perfect competition. For purposes of our discussion the most significant of these characteristics is perfect mutual knowledge. Each market participant must, at each instant, be fully aware (i) of the decisions that all fellow market participants would make under all conceivable price situations; (ii) of the decisions that are, in fact, being made by all fellow market participants; (iii) that all fellow participants have similar awareness, *ad infinitum*. The notion of an individual decision implies that a decision-maker,

[5] The version of mainstream theory presented and criticised in this section is a simplified one, but far from a caricature. The main simplification made in the text is to make it appear as if the perfect knowledge assumption in the mainstream theory is such as entirely to rule out the possibility of undesired outcomes due to incomplete information. Mainstream theory has sought to grapple with incomplete information. But it has done so by treating information as a costly resource, concerning which agents have full relevant information. This means that while agents may not know everything, they do know precisely the degree of mathematical risk associated with every risky option taken. They can never be surprised. An undesired outcome can certainly emerge from a choice made under risky circumstances, but, since the risk was deliberately assumed (in the light of the known risks) the 'undesired' outcome is no surprise, and was, indeed, in a sense, 'desired' (since the statistical *possibility* of its occurrence was known and the gamble was knowingly accepted in advance).

having a clearly ranked series of desired objectives and confronted with a perceived outcome, makes decisions with perfect rationality, that is, in strictly maximising fashion and without error.

The picture portrayed by this theory is, of course, that of the perfectly competitive equilibrium model. In reviewing the well-known criticisms of this model, it is not our purpose to deny that this model can serve useful analytical objectives. It is to point out the inadequacies of the model as a self-contained and complete explanation for the price and quantity phenomena observed in the real world. It is then easier to appreciate the Austrian theoretical innovations to be discussed at greater length in section IV. The perfectly competitive equilibrium model suffers from two difficulties – those arising from the *unrealistic* character of the assumptions of the model, and those arising from the *internal contradictions* from which the model suffers as an explanatory framework for understanding the real world. First we take up the second difficulty.

The Problems of the Assumed Solution

We have already cited Hayek's observation that, while it is generally made to appear, in textbook expositions of mainstream theory, that the question of how equilibrium comes about has been solved, 'these apparent demonstrations amount to no more than the apparent proof of what is already assumed.' (1949: 45). Hayek pointed out this is because mainstream models in effect assume perfect knowledge to have been achieved at the outset, throughout the system.

Once one appreciates the Hayekian insight that an attained state of equilibrium *means* universal perfect knowledge, it becomes obvious that no model in which perfect knowledge is *assumed* can be of direct assistance in explaining how an equilibrating tendency might occur. A model in which perfect knowledge is assumed is necessarily a model of already-attained equilibrium; it cannot grapple with the process in which imperfect mutual knowledge may tend (or fail to tend) to generate improved mutual knowledge. Consequently, quite apart from the unrealistic character of the perfect knowledge assumption in mainstream theory, that assumption renders such theory, when used to explain the equilibrative properties of markets, internally contradictory and incoherent.

Constructing a model in which all decisions are made without error not only paints a picture which does not correspond to reality. It paints a picture in which that configuration of decisions that is mutually sustainable without disappointment and without regret has, somehow,

already come to be made. This extraordinarily demanding requirement is implied by the misleadingly simple assumption of perfect knowledge. We cannot imagine a situation in which we simultaneously postulate perfect knowledge (as defined above) and a set of decisions that are *not* mutually sustainable without disappointment and without regret. We cannot imagine decision-makers deliberately undertaking courses of action which they *know* are bound to be disappointed or to be regretted.

So the mainstream theory locks us, at the very outset of analysis, into a pattern of decisions that are all mutually sustainable without disappointment and without regret. No matter how illuminating this picture may be as providing *in*direct clues as to how such a configuration of decisions might come to be attained, it cannot of itself portray any such process. Any adjustments needed to achieve this equilibrium configuration must have occurred prior to the moment pictured in the equilibrium model. Thus a view which sees the world as *at all times* in the relevant attained states of equilibrium clearly *rules out all the adjustments which might have made such attainment possible*.

This criticism of mainstream price theory applies only to claims that the theory explains *how* equilibrium prices and quantities emerge in the course of the market process. A mainstream theorist may simply *postulate* a universal tendency towards equilibrium, claiming then that the theory provides a valid understanding of market outcomes. If one believes that the market price for a given commodity does, at least roughly, correspond to the price that would prevail under equilibrium conditions, the theory which explains exactly what is implied by the phrase 'under equilibrium conditions' is certainly neither internally contradictory nor uninformative.

But our criticism of the theory would still be valid. Instead of charging incoherence in the use made of mainstream theory, criticism would focus on the arbitrariness of the postulate needed to render the theory of any interest in understanding the real world. A theory which relies, for its relevance, upon the arbitrary postulate of a universal tendency towards equilibrium, must be severely circumscribed. *By itself* it offers *no* explanation for the phenomena we are seeking to explain. And mainstream theorists who have honestly confronted the problem of deploying their theory to account for (or even to argue for) the successful achievement of market equilibrating tendencies, have been compelled to concede its fatal limitations in this regard.[4]

Some mainstream theorists dismiss this criticism. Granted, they

[4] Fisher (1983) is a prime example of such recognition.

would say, that the theory does not offer a picture of the equilibrating process. That does not affect the value of the theory in the slightest because the function of a theory is not to offer a picture of reality, even a schematic picture from which irrelevant details have been abstracted. It should provide a 'black-box' formula capable of generating predictions; the validity of a theory is not to be judged by the facsimilitude of the picture it presents, with reality, but only by the empirical accuracy of the predictions it generates (Friedman 1953: 3-43). This methodological position is considered below, in examining the unrealism of the assumptions of mainstream theory. Here we merely point out that, whatever the epistemological validity of this position, it simply does not satisfy the 'scientific curiosity' which inspires such questions as 'what is the secret of capitalist success?', 'why and how do markets work so well?' Mainstream theory fails to provide that satisfying explanation which legitimate curiosity is seeking.

The Unrealism of Mainstream Theory

As mentioned earlier, one line of criticism directed at mainstream theory concerns the unrealism of the assumptions upon which that theory relies. The offending assumptions are, in particular: (i) those relating narrowly to the way in which individual decision-making is modelled in the mainstream theory; (ii) those implied by the perfectly competitive conditions which loom so prominently in mainstream theory.

The Individual Decision in Mainstream Theory

For mainstream theory, the analytical unit is the decision of the individual. But this decision and the manner in which it is imagined to be made, turn out to be wholly artificial and stylised. Real-world men and women do not reach their decisions in the mechanical fashion and under the stylised circumstances portrayed in mainstream theory. The theoretical model of decision-making adopted in mainstream macroeconomics abstracts from key features of the real-world context in which human beings make decisions. Such abstraction denatures human choice to the extent that the resulting theory of the individual decision must be pronounced false, as a representation of actual human choices. A theory of market phenomena, built upon choice-theoretic foundations which do violence to reality, cannot enable us to trace those phenomena to the human actions out of which they have been created.

For mainstream decision theory, the context of the decision is

'closed'. Analysis of individual market-participating decision-making proceeds by first imagining each agent to be confronted by a clearly specified problem in constrained maximisation. The agent has a clearly defined and ranked set of objectives; he confronts price possibilities governing each prospective trade in which he might participate; and he begins with a known set of initial human and/or other resources at his disposal. His decision is made in strict maximising fashion, subject to the constraints of his situation. He is programmed, as it were, to select that combination of transactions which will faultlessly and inevitably convert his initial endowment into the most preferred combination of attainable objectives. He can never have any opportunity to exercise imagination or boldness; he can never be surprised. But this way of imagining decision-making diverges in crucial respects from the real context of human choice (Shackle 1972).

It is impossible to imagine any real-world situation in which a decision-maker does not recognise that he must make his choices within an *open-ended* context. The decision-maker is *not* presented, as it were, with given resources. On the contrary, it is *in the course of the decision itself* that the human decision-maker *determines* what objectives are most important, and what resources are in fact available to him. The decision-maker must include these determinations under the rubric of the decision because the situation he confronts is, at each instant, open-ended. The agent does *not* necessarily know in advance what courses of action he must choose among; he does not necessarily know in advance what the consequences of any prospective course of action will be; he may not even have considered which objectives are worth thinking about realistically and in what ranking of urgency he would place them.

The inescapable and radical uncertainty[5] faced by each human agent ensures the open-endedness of human choice. When a human being takes an action, he is, *in that action*, grasping at a specific picture of the future as the relevant framework for his action. Action *consists* in grappling with an essentially unknown future. To imagine human choice as being made within a 'closed' framework, with given ranked goals and given available resources, may constitute for some purposes a useful simplification, throwing light on certain aspects of human choice. But such simplification comes at a distressingly high price. It diverts analytical attention from features of actual decision-making

[5] The term 'radical uncertainty' has been used to emphasise the Knightian character of the uncertainty facing real-world agents (as distinct from insurable risk). See also O'Driscoll, Jr. and Rizzo (1985).

which are crucial in understanding the market process.

The mainstream portrayal of the individual decision permits derivation of determinate theoretical conclusions, undisturbed by the vagaries introduced by unsystematic human efforts to cope with open-ended uncertainties of the great unknown. But it *obscures* our understanding of market processes. The drastic modifications with which mainstream micro-economic theory incorporates the individual decision, the filtering out of all potential for surprise, prevent us from seeing the determining forces operating in the market.

Mainstream Market Theory

The core of mainstream theory refers to the perfectly competitive model of markets. To examine the consequences of the unrealism of its assumptions, it is helpful to consider the perfectly competitive model of the Marshallian market for a single commodity. The model explains price, in such a market, as being pushed instantaneously or rapidly towards the market-clearing level, at which all potential sellers are able to sell all that buyers wish to buy (at that price). The assumptions adopted for this model – which ensure the inevitability of this outcome – are well-known, at least ever since Frank Knight's classic articulation of the perfectly competitive market economy (1921: chapters 3-6). For our purposes, these assumptions include especially perfect knowledge, and the infinity of buyers and sellers in the perfectly competitive market. Both these key assumptions – which imply that, at the going market price for the relevant good, each buyer expects (correctly) to be able to buy as much as he wishes, and each seller expects (correctly) to be able to sell as much as he wishes – are wildly unrealistic in regard to the commercial world with which we are familiar.

This gaping chasm between the real world and the perfectly competitive theoretical portrayal of it moved Edward Chamberlin (1956) to construct more complicated models (of monopolistic competition) which would be less offensive in this regard. Instead of a picture of a world in which each seller believes it possible to sell an unlimited quantity of his product at the market price (that is, he faces a perfectly elastic, horizontal demand curve), Chamberlin built a theory based on the assumption that a seller is typically aware of being able to sell more goods if he is prepared to lower the price. Earlier theory had confined the possibility of a seller facing a downward-sloping demand curve to special cases of pure monopoly. Chamberlin, however, argued for a general theory which recognised the empirical reality of competition between similar, but not identical, products, and the associated

empirical reality of sellers' awareness that the price they charge is significantly under their own control.

Despite this valiant attempt to restore a modicum of realism to the theory of markets, and despite an enormous literature that sprang up around this attempt, it failed to make a permanent impact upon mainstream theory. The late twentieth-century mainstream theory of price places more, not less, emphasis upon the perfectly competitive model than had been the case when Chamberlin completed his doctoral dissertation in 1927.

Production is of course carried on in markets in which the number of producers (and even of retailers) is far from infinite. The typical producer or retailer agonises over whether or not to raise or lower the price he will ask. The contrast between the picture offered in the model of the perfectly competitive market for a given product, and the real-world business scene, is so striking as to strain credulity. As noted earlier, the perfectly competitive model is inherently, by its very assumptions, incapable of explaining how a market works. But it is not just that it cannot explain how present market phenomena came to be what they are; the model requires us to see current market phenomena in an analytical framework that cannot fit the empirical pattern we are seeking to understand.

The Perfectly Competitive Model and Critics of the Market Economy

The implications of these unrealistic features of the perfectly competitive model have not been lost on critics of the market economy. They do not, in the context of late twentieth-century mainstream macro-economics, have to base their attacks on the efficiency of the market, upon any critique of the *logic* of price theory. They merely have to embrace the perfectly competitive model and point out the obvious respects in which real-world capitalism falls short of the ideal conditions required in order for the social welfare optimalities of the perfectly competitive model to apply.

Mainstream micro-economic theory therefore not merely fails to provide the theoretical explanation we seek for the market successes we observe: that theory provides critics of the market economy with the intellectual ammunition they need to press their attacks on the efficiency of capitalism. They merely need to tick off the respects in which real-world capitalism departs from the requirements for perfectly competitive optimality.[6]

Pointing out these implications of the unrealism of the perfectly

competitive model used in mainstream theory does not establish the invalidity of that theory. But it does demonstrate the price being paid in order to take advantage of the elegance and orderliness of that theory. Searching for an explanation of how and why markets do work using a patently unrealistic model, such as that of perfect competition, is likely to result in the conclusion (counter to our direct observation) that markets do not, in fact, achieve efficiency at all.

As explained in section IV, the theory of entrepreneurial discovery finds the explanation for market efficiency precisely in those real-world features of commercial markets which have been deliberately excised from the pictures portrayed by the perfectly competitive models. A particular aspect of the real world is its disequilibrium character. At any given moment, the market is *not* characterised by attained equilibrium. In this respect, our positive theory of how markets work differs sharply from the attempts of Edward Chamberlin to introduce realism into price theory by postulating 'imperfections' in market competition. The point is worth some emphasis, because it permits us to sum up and make more explicit criticisms of the lack of realism in mainstream theory.

All the points in mainstream theory upon which we have focused on the grounds of absence of realism, turn out to be attributable to the exclusively *equilibrium* character of that theory. Both at the level of individual choice and at the level of market outcomes, mainstream theory deliberately confines itself to situations of attained equilibrium. The first part of this section focused on the incoherency of attempting to explain possible processes of equilibration strictly in terms of models characterised by already-attained equilibrium. The latter part of this section pointed out the numerous aspects of real-world commercial life which are incompatible with the assumption of already attained equilibrium. Now the mere failure of a theoretical picture to replicate with precision all features of the reality it seeks to explain, is not necessarily fatal for the usefulness of that theoretical picture. But mainstream theory filters out of the picture those aspects of reality which are the core of an adequate explanation for market phenomena.

---

[6] Indeed, mainstream theory has at various times been seen as supporting the economic desirability of the market economy, only on the condition that it be buttressed by decidedly aggressive types of government intervention. For example, the market economy has been endorsed only if it is subject to powerfully intrusive anti-trust regulation, or provided the market's distribution of incomes can be 'corrected' by taxation. The strong reservations, discussed in later sections of this paper, concerning such proposals for intervening in market operation and market outcomes, will be seen to derive directly from a rejection of the reservations which circumscribe the mainstream model's arguments in favour of the market economy.

Those features of reality which cannot find a place in an equilibrium model turn out to be the keys to the explanation.

Chamberlin's attempt to restore realism by constructing models of monopolistic competition missed the mark. He did not recognise that the source of the offending unrealism lay in the assumption of already-attained equilibrium in the perfect competition model. What he proposed instead was a more complicated equilibrium model. The model of attained monopolistically competitive equilibrium is in a number of respects less insulting to our sense of realism than the model it sought to replace; nonetheless, the new model suffers from the same cardinal fault. By postulating already-attained equilibrium it cannot explain how equilibrium might come to be approached. The theory misses the opportunity to provide a satisfactory explanation by considering the disequilibrium features of the market.

IV. THE THEORY OF ENTREPRENEURIAL DISCOVERY

The theory of entrepreneurial discovery sees the explanation of market phenomena in the way entrepreneurial decisions, taken under disequilibrium conditions, bring about changes in prices and quantities. The market process so initiated consists of continual entrepreneurial discoveries; it is a process of discovery driven by dynamic competition, made possible by an institutional framework which permits unimpeded entrepreneurial entry into both new and old markets. The success which capitalist market economies display is the result of a powerful tendency for less efficient, less imaginative courses of productive action, to be replaced by newly discovered superior ways of serving consumers – by producing better goods and/or by taking advantage of hitherto unknown, but available, sources of resource supply. The theory focuses on the concept of discovery in contrast to the notion of the individual decision in mainstream theory.

Breaking out of the Neo-classical Box: The Concept of Discovery

The discovery concept points to a way of escaping from the closed-ended analytical box in which modern neo-classical economics confines the theorist. The stylised decision-maker is unable to exercise genuine choice. Given arrays of objectives and available resources automatically mark out the option-to-be-chosen; any other option is ruled out in advance. It is unthinkable that the decision-maker might deliberately select a less preferred option instead of a preferred option (and what is more preferred and less preferred is known to the agents as defined by and in the given arrays of objectives and available resources).

So the act of choice consists in nothing more than computing the solution *already implicit* in the data. There is nothing creative in such an act. And since it is assumed that decisions are inevitably and inescapably made without error, this mainstream notion of the decision in effect squeezes the decision-maker out of the picture; the decision is 'made' by the sets of data which are 'given' prior to the decision. Mainstream theorising adopts this stylised concept to render the outcome of decisions determinate, unaffected by unsystematic factors such as impulse, surprise, or fear. But, in order to escape the limitations

of such theory, we have to escape this narrow notion of the decision. The notion of discovery points the way.

When a surprising discovery is made, it cannot be ascribed to any deliberate act that can be fitted in to the neo-classical concept of the decision. There has been no deliberate search for a piece of information (the value of which was known in advance, and the cost of finding of which was known in advance). Rather the act of discovery consisted in having 'undeliberately' *noticed* what was *already* costlessly knowable. Where the neo-classical concept of the decision makes it unthinkable that an available gainful opportunity has not been grasped, a more realistic perspective permits us to recognise that such opportunities *may simply not have been noticed*. An opportunity may not be grasped not because the information needed to grasp it was too costly to make it worthwhile, but because the costlessly obtainable opportunity (or the costlessly available information that would have brought the opportunity within immediate reach) was simply, 'inexcusably', overlooked. An act of discovery occurs when someone notices what has up to now been overlooked.

Recognising the possibility that a gainful opportunity may fail to be grasped because it has not been noticed permits the appreciation of dimensions of individual choice and of social interaction which standard economic theory obscures. It also liberates theorising from the closed-ended neo-classical box in which everything occurs inevitably. We are no longer imprisoned in a world where the course of events unfolds inexorably under the mechanical, clockwork-like programming of the maximising postulate under given initial circumstances. Awareness that opportunities may go unnoticed, and therefore ungrasped, allows us to explore the pure discovery of hitherto unnoticed opportunities. The theory of entrepreneurial discovery offers the key to understanding the market process.

Discovery and Entrepreneurship

Mises's observation that 'in any real and living economy every actor is always an entrepreneur and speculator' (1949: 253) draws attention to the link between the 'open-ended' conception of individual decision-making, and the entrepreneurial function in the market process. For Mises the analytical unit is the human act, and the essential feature of the human act is its speculative and entrepreneurial dimension. This leads us directly to appreciate the parallelism between the individual act and the entrepreneurial function in markets.

Every individual act constitutes, necessarily, an act of discovery. In

acting, the individual is not simply (as in neo-classical theory) spelling out the implications of the preference rankings given at the outset; he is, at the moment of action, alertly *establishing* those preference rankings (with all their implications), in the face of the radical uncertainty he confronts. When he acts to seize an opportunity, he is not seizing a 'given' opportunity; he is, at that moment, declaring that opportunity to exist. He is, as it were, *discovering* that opportunity's existence. The human act *simultaneously* establishes the framework within which one can imagine deliberate maximisation to occur, and pursues the maximising implications of that framework. The establishment of the framework constitutes an act of discovery; that framework was itself neither 'given' to the decision-maker nor inexorably implied in some prior 'given' meta-framework.

The most careful prior deliberation could not define the framework established at the moment of action. Establishing the existence of an opportunity framework calls for *alertness* to a set of circumstances hitherto not yet noticed. A 'framework' involves not only assumed given arrays of goals and of resources; it involves *expectations* of relevant goals and of relevantly available resources *in the future*. The uncertainty enveloping the future means that the establishment of such an expectational framework of ends and means constitutes, necessarily, a creative act of discovery. To act means to grasp an opportunity; to grasp an opportunity means to discover it, to identify it out of the ambiguities and clouds of an infinite array of alternative prospective futures.

Such an act of discovery involves more, however, than finding something that happens to attract attention. The discovery of an *opportunity* means the discovery of anomaly. Discovering an attractive opportunity always represents something of a pleasant *surprise*. If the gain embodied in the opportunity had been fully anticipated, grasping it would hardly represent a creative act of discovery. The gain would be nothing but the realisation of something fully expected. Because, for Mises, human action is essentially geared to the radical uncertainty of an unknowable future, it is inescapably speculative. Human action *is* discovery.

An act of discovery in which resources are deployed to achieve an objective represents the realisation that, before the discovery, the relevant resources had been *undervalued*. The full potential of these resources had not been up to now understood. Thus the act of discovery, and thus indeed every human action, represents the discovery of hitherto *unsuspected value* in hitherto undervalued resources.

Here we have the key to the profoundly significant Misesian parallelism between the individual act and the pure entrepreneurial function. The pure entrepreneurial function consists in buying cheap and selling dear – that is, in the discovery that the *market* has undervalued something so that its true market value has up to now not been generally realised. This permits the pure entrepreneur to buy something for less than he will be able to sell it for. His act of entrepreneurship consists in realising the existence of market value that has hitherto been overlooked.

Pure entrepreneurship in the market bears, then, the very same relationship to the decision-making that occurs in the neo-classical theory of the firm as does Misesian human action to the neo-classical model of the individual maximising decision. In the neo-classical theory of the firm the owner of the firm maximises the difference between revenues and costs. Both the revenues and costs associated with alternative levels of output are given. The 'profits' the firm so maximises are thus fully expected and known to be available *before* the firm's output decision is made. There is no surprise whatsoever in the 'profits' grasped through the firm's decision. Winning them constitutes, in effect, nothing more than mechanically carrying through a plan firmly settled on in advance.

But the entrepreneurial decision in the context of a market is quite different. The entrepreneur who 'sees' (discovers) a profit opportunity, is discovering the existence of a gain which had (before his discovery) not been seen by himself or by anyone else. Had it been seen previously, it would have been grasped or, at any rate, it would have been fully expected and would no longer then be a fresh discovery made *now*. When the entrepreneur discovers a profit opportunity, he is discovering the presence of something hitherto unsuspected.

Exactly the same kind of liberation for the individual decision inside or outside a market setting provided by the human action concept (as opposed to the closed-ended-context version of neo-classical decision-making) is to be found (for the theory of markets) in the notion of pure entrepreneurship.

Either Entrepreneurship or Equilibrium

Recognition of the parallelism between the Misesian concept of human action in the face of open-ended uncertainty, and the purely entrepreneurial role in markets, highlights the limitations surrounding the use of exclusively equilibrium models.

An equilibrium world is one without scope for entrepreneurial

discovery and creativity: *the course of market events* is foreordained by the data of the market situation. No entrepreneur can, within the straitjacket assumptions of the equilibrium model, alter the foreordained sequence of market events. The only circumstance which can induce a genuine change[7] in the sequence of market events is an exogenous shock to the system.

The only changes that can occur in a neo-classical market are those traditionally analysed with comparative statics, in which history is seen as a sequence of equilibrium situations. Consequences of exogenous changes in the data are 'explained', not by tracing though the step-by-step changes that might ensue from such exogenous changes, but by jumping from a picture of one inexorably foreordained world to a picture of a different inexorably foreordained world. While this approach fulfils its presumed objective of filtering out unsystematic sources of change, it does so at the price of providing any genuine explanation of how the world could in fact possibly make the (non-foreordained!) transition from the first picture to the second.

The Driving Force of Entrepreneurial Alertness

In contrast, the world of disequilibrium offers scope for entrepreneurial discovery and consequently for genuine change. Consider a situation in which a commodity is being sold at two different prices in two separated parts of the market (between which transportation costs are zero). Such a situation of disequilibrium is, within the scope of mainstream theory, strictly impossible. In mainstream theory, with all parties being aware of the two prices being accepted, those paying the higher prices are clearly failing to pursue their preferences consistently (since they presumably prefer paying less to paying more). Similarly, those accepting the lower prices are acting at variance with their own preferences.

But in the framework of the Austrian theory of entrepreneurial discovery such a situation is not merely possible, it is unavoidable. Complete relevant information is no longer assumed. Those paying the higher price do so simply because they are unaware of the lower price that is available. Those accepting the lower price do so simply because they are unaware of the higher price being paid. The divergence between the two prices constitutes an opportunity for pure profit. A buyer buying at the lower price may sell it at the higher price and thus

[7] The term 'genuine change' distinguishes such changes from those mechanically generated, fully anticipated 'changes' that are programmed to emerge from the clockwork-like operation of multi-period, intertemporal equilibrium conditions.

win the difference as pure profit. It is important to notice that, until we introduce the element of entrepreneurial alertness, we have no basis upon which to postulate any change in the situation – ever. Those unaware of prices lower than the price which they are paying, may remain so unaware indefinitely; those unaware of prices higher than the price they are accepting may remain so unaware indefinitely.

As soon as entrepreneurial alertness is introduced, however, matters are drastically altered. There is now room for the possibility, if not near certainty, that the profit opportunity constituted by the price difference will be noticed by an alert entrepreneur. Once noticed, the pure profit opportunity will be promptly seized (since it is now perceived pure gain, costlessly available). This will involve additional buying in the low-price market (tending to push price up) and additional selling in the high-price market (tending to push price down).

Entrepreneurial discovery of the profit opportunity constituted by the initial price differential is thus a powerful force pushing the two prices towards each other, eliminating both the price differential and the profit opportunity it offered. The most fundamental law of price theory, Jevons's Law of Indifference, asserting a tendency for a single price to emerge throughout the market for a given commodity, thus finds its place and its explanation within the theory of entrepreneurial discovery. The constant changes occurring in the world continually occasion new situations concerning which market participants will typically be unaware. New causes of disequilibrium and of price differences are continually arising. But, at the same time, these disequilibria continually generate forces tending to discover the opportunities so created. The tendency towards a single price is continually interrupted – but continually resumed.

The entrepreneur's discovery is not a deliberate act of learning nor of search. He had previously been unaware of the existence of the price differential. Transition from unawareness to awareness was not a deliberately taken step. Nor is it a step that can be explained by invoking any action that has a place within mainstream theory. In order to understand the most powerful (and characteristic) moving force within the market economy, it is necessary to step outside the paradigm of mainstream theory, and invoke pure entrepreneurial discovery.

For mainstream theory, the very possibility of two different prices existing disequilibrium-fashion simultaneously in the market is one that is, strictly speaking, unthinkable. Jevons's Law of Indifference has, in mainstream theory, come to mean nothing more than that anything

except a single price for a commodity through the market is ruled out by assumption.

It might, however, be argued that mainstream neo-classical theory *can* handle both the possibility of the two-price situation, and the tendency for both prices to move towards each other, within its equilibrium framework. We rule out, of course, a neo-classical explanation referring to differences in commodity quality, or in differences between the convenience of shopping for the commodity in different locations. Such explanations are illegitimate and irrelevant because they do not represent two prices for the *same* commodity (defined to include not only the quality dimension but also the utility of activities which come packaged with the physical commodity whose price is under discussion). But at first glance it would seem possible, in a neo-classical world, to postulate the existence of two prices for the same commodity, as soon as we admit the possibility of imperfect information.

Neo-classical economics proceeds as if full awareness exists of all relevant aspects of the situation. But this need not imply omniscience. The neo-classical theorist understands that the buyer paying the higher price knows that the commodity is available at a lower price, but also knows that in order to find out exactly how to take advantage of the lower price he would have to expend learning or search resources on such a scale as to make it worthwhile to continue paying the higher price. Such a situation is an equilibrium, and therefore acceptable from the point of view of neo-classical economics because there *is* an explanation for the price divergence. If it *is* worthwhile to undertake deliberate learning or search, and if the learning or search process is itself a time-consuming one, then we can expect, within the neo-classical framework, that the initial price differential will gradually disappear, as the additional information gradually spreads throughout the market. At each point in time each market participant, and the entire market, is in complete neo-classical equilibrium. The dynamic version of Jevons's Law of Indifference has, it might thus be argued, been retrieved within the neo-classical framework.

However, while imperfect information certainly can account in the neo-classical framework for two prices for the same commodity, this does *not* generate the dynamic version of the law of the single price. While the time-consuming character of learning may explain why it takes time for two prices to converge, the possibility of such deliberate learning does not ensure any converging tendency. On the contrary, it is eminently possible that the very costs of learning which prevented

earlier learning from having occurred will *continue* to deter market participants from learning how to take advantage of better prices available in the market. The initial equilibrium multi-price situation may, therefore, prevail indefinitely precisely because it *is* an equilibrium.

What renders the two-prices-for-the-same-commodity case a possibly genuine disequilibrium situation is the possibility that there may be *no* 'rational' explanation (that is, an explanation in terms of deliberate knowledgeable decision-making) for the price differential. It may be that, after the costs of learning have been tallied (or, in the extreme case when these costs are zero because the existence of the two prices is plain to see) we have *no* explanation for the buyer who pays the higher price, and the seller who accepts the lower price other than that market participants have simply failed to notice what was staring them in the face. This glaring absence of a 'rational' explanation for the price differential renders it a disequilibrium situation – a situation which cannot be expected to last for long because the pure profit opportunity constituted by the price differential will attract entrepreneurial discovery.

The driving force of entrepreneurial discovery refers to the prevalence of pure profit opportunities, that is, of situations which seem to *defy* rational explanation. Moreover, such situations can be expected to be systematically whittled away by spontaneous entrepreneurial discovery of the pure profit opportunities they represent. Entrepreneurial discovery exercises a systematic force upon markets, tending to drive them at each moment *away* from the disequilibrium situations which cried out for discovery.

System Out of Chaos: The Paradox of Entrepreneurship

The paradox of entrepreneurship in a market economy is as follows. Mainstream theory left entrepreneurship out of its picture because entrepreneurship seems chaotic and unpredictable. Boldness, impulse, hunch are the raw materials of entrepreneurial success (and failure); they seem to render the possibility of systematic, determinate chains of events unlikely. In order to perceive regularities amidst the apparently chaotic vagaries of real-world market volatility, it may seem methodologically sound to imagine a world with *no* scope for entrepreneurship. Yet, paradoxically, exactly the opposite is the case. It is *only* when entrepreneurship is introduced that we begin to appreciate how and why markets work. Without the possibility of entrepreneurship, no genuine explanation for market co-ordination is possible (aside from

arbitrarily *postulating* that co-ordination always fully and instantaneously prevails). The 'chaos' introduced by entrepreneurship is required to account for the systematic character of real-world market processes.

Introducing scope for entrepreneurship permits a degree of freedom which makes it possible for errors to be made – that is, for decisions to be made that fail to take full account of relevant circumstances. It may indeed not be possible to explain how errors come to be made or which specific errors occur. There is no economic theory which describes which features of reality are likely to be 'unexplainedly' and irrationally overlooked. But understanding how the market phenomena of any moment reflect errors made as a result of unawareness opens up possible understanding of the way such phenomena change over time.

It might at first glance seem that, just as one cannot understand which specific features of reality come to be unaccountably overlooked in the first place, it might also be impossible to predict whether any of these overlooked features will be noticed later. After all, what was overlooked yesterday, may be overlooked today and tomorrow. But such a conclusion would be too hasty. Economists *are* able to identify one feature of a market economy which acts powerfully to direct (or to attract) entrepreneurial alertness towards the correction of earlier errors – such errors of the kind we have discussed made in a market economy manifest themselves as *opportunities for pure profit*.

These earlier errors may come systematically to be discovered because of the tendency for entrepreneurial alertness to 'smell' or sense where pure entrepreneurial profits can be won. The systematic character of the market process stems from the human propensity to sense (*without* deliberate search) where to find pure gain. Our economic analysis teaches where and how errors come to be translated into opportunities for pure profit, and so provides understanding of the tendencies these errors create for their systematic correction.

Jevons's Law of Indifference Extended

The fundamental law tending to ensure convergence among the market prices for a given commodity also operates with powerful consequences in less obvious circumstances. Consider a production process in which a given combination of different resources is deployed to fabricate a product. The producer buys each of the necessary resources in order to produce the product, which he sells to consumers. To say that an entrepreneur-producer is making pure profits in the production and sale of this commodity means that, after

calculating the prices he pays for *all* resources needed to produce the product and deliver it to the door of the consumer, their sum is less than the amount paid by the consumer. This situation, too, is an example of the 'same commodity' being sold at different prices in different parts of the 'same' market.

The sum of the prices paid for the resource bundle needed to produce and deliver the product, is lower than the price paid by the consumer for that delivered product. But the bundle of *all* the required resources *is*, in effect, the commodity that bundle is able to produce. Nothing more is needed than, so to speak, to say 'Go!' To possess that bundle is, in effect, *already* to possess the commodity. So that the possibility of earning pure profit through selling the commodity at a price higher than that at which the resource bundle is being sold is because the 'same' commodity is being sold in some parts of the market at a lower price (in the form of resources) than it is being sold at in other parts of the market (that is, as a finished consumer good).

If the resource bundle did indeed include all necessary resources, we have no 'rational' explanation for this multi-price situation. There is no reason why consumers should be willing to pay more for a finished product than the sum needed to obtain command of *all* the resources (including all the time and trouble needed to buy and assemble the resources used in fabrication itself) required to deliver the finished product to the consumer. The only explanation for this price discrepancy lies in awareness of pure error on the part of market participants.

Such error means that some market participants have undervalued these resources relative to the future eagerness of consumers to acquire the product in question when it can be produced. This undervaluation can be 'explained' only as an 'unexplainable' error, a failure to see a future that is in fact staring one in the face. Such error manifests itself, exactly as in the simple case of the commodity selling for more than one price, in a pure profit opportunity.

Whenever an entrepreneur senses the possibility of pure profit by moving into a new line of production, or by innovating a new method of production, he is taking advantage of what he believes to be a case where the market is erroneously assigning two different values to what is, in economic reality, the same item. The powerful driving force of entrepreneurial alertness is always and everywhere at work, noticing such errors through the attraction provided by the pure profit which such errors create. Entrepreneurial profit-making is occurring, not only through bringing the prices of a given physical good towards equality throughout the market. The same entrepreneurial profit-making oper-

ates towards bringing resource prices into relevant equality with future product prices.

Ludwig von Mises expressed this with great clarity:

> What makes profit emerge is the fact that the entrepreneur who judges the future prices of the products more correctly than other people do buys some or all of the factors of production at prices which, seen from the point of view of the future state of the market, are too low. (1962: 109)

What is important is that, in operating along this dimension, entrepreneurial alertness is not only pushing prices towards relevant 'equality', it is also *moving resources from one line of production to another*. The tendency, in a market economy, for resources to become reallocated from less productive uses (as judged by consumers) towards more productive uses, operates through the same entrepreneurial discovery procedure which creates a tendency for the prices of a given commodity to move towards equality. The extension of Jevons's Law of Indifference turns out to explain the market forces responsible for capitalist allocative efficiency.

For this allocative tendency to be set into motion, it is not necessary that the entrepreneur is aware of the present misallocation of resources. He does not need detailed knowledge of the industries in which the resources are currently employed; he does not need to be familiar with technical production conditions of, and consumer interest in, the products in those industries. He merely has to sense that pure profits may be won by buying the necessary resources.

Of course, in order to sense the possibility of pure profits in a particular line of production, through having a 'nose' for price differences, it is most helpful for the entrepreneur to have a keen sense (or, at least, a keen sense of where to hire employees with this keen sense) both for technical production possibilities and for future consumer preferences in *this* line of production. But ultimately it is his sense for the possibility of pure profit (because of differences between resource prices and product prices) which drives his activity and motivates his alertness to technical production possibilities and to future consumer preferences. It is the law of the single price which, working through the process of entrepreneurial discovery, powerfully redirects the pattern of capitalist production into more, rather than less, allocatively efficient channels.

Errors of Over-Pessimism and Errors of Over-Optimism

The errors which express themselves as pure profit opportunities are not the only ones which can be made in a disequilibrium world of open-ended uncertainty. Errors which result in pure profit opportunities are errors stemming from over-pessimism. There are, in addition, errors of over-optimism which also play important roles in the entrepreneurial discovery process of the market economy.

Errors of over-pessimism are those in which superior opportunities have been overlooked. They manifest themselves in the emergence of more than one price for a product which these resources can create. They generate pure profit opportunities which attract entrepreneurs who, by grasping them, correct these over-pessimistic errors. The other kind of error, error due to over-optimism, has a different source and plays a different role in the entrepreneurial discovery process.

Over-optimistic error occurs when a market participant expects to be able to complete a plan which cannot, in fact, be completed. A buyer mistakenly plans to buy a commodity or a resource at a price so low that the item is not obtainable at the price. A seller plans to sell an item at a price so high that in fact no buyer is willing to buy at that price. This kind of error does not generate pure profit opportunities which are corrected through entrepreneurial alertness. Over-optimistic errors tend to be corrected by more direct market forces, calling for less creative entrepreneurial alertness.

An over-optimistic error tends to manifest itself in a price either too high or too low to clear the market for that good. Thus if sellers have been, in general, over-optimistic, they will be expecting higher prices than buyers are, in general, prepared to pay. If buyers have been over-optimistic, they will be expecting prices that are lower than sellers are, in general, prepared to accept. Such mistaken expectations do not necessarily mean that the market price will be at variance with those expectations. After all, if sellers are unwilling to sell at a price below $300 (because they mistakenly believe that at this price they can sell all that they wish to sell), then any units sold will indeed have been sold at that price or higher (since no one who expects to be able to sell at $300 will accept less). The over-optimism will be revealed not necessarily by an initial failure of the market price to be at $300, but by the unexpected failure of some or all sellers to sell what they had expected to be able to sell at that price.

Market price, in this kind of disequilibrium situation, will be too high to clear the market. It is a case of disequilibrium because we feel

fairly confident that, if the market price for a good is indeed higher than the market-clearing level, sellers will soon realise this (as a result of the pile-up of unsold goods), and will lower their expectations and reduce their asking prices. Similarly, if over-optimism on the part of buyers has resulted in prices being below the market-clearing level, this situation will reveal itself in the form of shortage, and buyers, realising their error, will bid higher prices to obtain the commodity or resource they wish to buy.

Where over-pessimism arises from failure to realise that more eager buyers or sellers for a commodity indeed exist than had been expected, over-optimism arises from believing that buyers and sellers are *more* eager than they actually are. Errors arising from over-optimism are more likely to be rapidly discovered than are errors arising from over-pessimism. An opportunity which has not been seen *may* (even though it offers its discoverers pure profit) continue to remain unnoticed in the future. But an error arising from over-optimism *must* surely be discovered simply because it involves making a plan which cannot and will not be completed. Prices which are too high will be revealed to have been too high by piles of unsold goods; prices which have been too low will be revealed to have been too low by the shortages they create. Certainly, entrepreneurial judgement may be required to interpret these shortages (or surpluses) correctly. But, sooner or later, prices that are too high must come down, and so on.

The major insights of the theory of entrepreneurial discovery can now be summarised:

- At any given moment market participants are (virtually inevitably) likely to be suffering from unawareness of the true (present and future) plans of other market participants.
- Such unawareness may take the form of undue optimism (as when sellers of a good expect buyers to be more eager to buy that good than they really are), leading to a disequilibrium price for a good that is too high or too low to clear the market. Disequilibrium prices generate direct *disappointment* of plans (as when sellers who have refused to sell for lower prices, discover their customers are simply not buying at the high prices). Such disappointment can be expected to alert entrepreneurs to the true temper of the market. Prices that were too high will tend to be lowered; those that were too low will tend to be bid upwards.
- Unawareness may also (and generally more importantly) take the

form of undue pessimism. Sellers may underestimate the eagerness of buyers to buy. Buyers may underestimate the eagerness of sellers to sell. Such unawareness leads to more than one price for the same good (or a lower price for the resources bundle, and a higher price for the product the resources can deliver). Such price differences constitute opportunities for pure profit and therefore tend to attract entrepreneurial attention. The price differences will tend to be eroded by entrepreneurial action to grasp these profit opportunities.

- If one could, for purely analytical purposes, imagine consumer preferences, resource availabilities, and technical possibilities as frozen in time, then the entrepreneurial discovery processes will tend to ensure that the price of any given good or service will tend towards equality throughout the market, that resource-bundle prices will tend to equality with the prices of the respective commodities they can deliver through production; that, at the uniform prices so achieved, the market for each consumer good or service, and for each resource service will tend to clear; and that all prospective buyers will find what they wish to buy at the price they expect and all prospective sellers will find buyers prepared to pay the prices which the sellers are expecting and are prepared to accept.

- In the course of the market movements achieved through these tendencies, not only will resource and product prices be modified as described but, more importantly, resources will be shifted continually from less important uses (as measured by the prices consumers are prepared to pay) to more important uses, less productive technological uses for resources will come to be replaced by more productive technologies; and undiscovered sources of new resources will tend to be discovered.

- In the real world of incessant change in underlying consumer preferences, resource availabilities and technical possibilities, these corrective tendencies may be partly or wholly frustrated or interrupted. In addition, these tendencies, operating in different parts of the ever-changing market, may interrupt and confuse *each other*. But the direction of the powerful forces of entrepreneurial discovery will be shaped and moulded by the above-described systematic and corrective processes of error, disappointment, discovery, and surprise.

A number of important features of the theory of entrepreneurial discovery remain to be briefly discussed.

Competition and Entrepreneurship

The critical discussion of mainstream neo-classical theory in section III focused particularly on features of the model of perfect competition central to that theory. The concept of competition used in mainstream theory is quite different from the corresponding concept in the Austrian theory of entrepreneurial discovery. For mainstream theory competition is the closer to perfection as market conditions approach the ideals of complete information throughout the market, and infinite numbers of buyers and sellers of each commodity or service. For the theory of entrepreneurial discovery, on the other hand, the relevant concept of competition involves only one condition, that of *freedom of entry* into each conceivable market.

Both for mainstream neo-classical theory and for the Austrian theory of entrepreneurial discovery, competition is required in order to account for the phenomena which are to be explained. But here the common ground ends. For mainstream theory, competition is a required assumption in order to ensure that the situation described is indeed an equilibrium and to distinguish it from other possible equilibrium configurations (for example, that under pure monopoly). But, for the theory of entrepreneurial discovery, competition is required to account for the dynamic entrepreneurial process described above. Consider the case in which freedom of entry has been sharply abridged.

Where (for example as a result of a government grant of monopoly privilege to a favoured manufacturer) potential entrepreneurs are blocked from entering a particular industry, this must paralyse the market discovery process. Suppose, as is plausible, the protected monopolist is enjoying monopoly rents and so is able to charge a price which substantially exceeds relevant costs of production. Then this situation will not be eroded by competitive forces, since entry is blocked.

The monopolised product may be urgently needed by potential consumers, and resources now employed in other, less urgently needed industries, might more productively and profitably be used in this (monopolised) industry. But discovery of the profit possibilities is rendered less likely because entry restrictions prohibit the grasping of such profits by new entrepreneurs even if the existence of these profits is discovered. Perhaps the technology now in use in the monopolised

industry could be dramatically improved, resulting in a substantial reduction in costs of production. Such new production techniques might have been discovered, under conditions of free entry, by potential entrepreneurs on the prowl for pure profit opportunities. But such discovery is rendered less likely because entry restrictions prevent the winning of such profits by innovative entrepreneurs. Where the grasping of profit is prohibited, the process of technical discovery is sharply inhibited or totally paralysed. The entrepreneurial discovery process depends upon the awareness by potential entrepreneurs that any pure profit opportunities they may discover will redound to the discoverer's benefit.

The dynamic character of the competition central to the process of entrepreneurial discovery exercises powerful forces operating not only on prices, but on the quality characteristics of products and on the techniques of production. The driving force of entrepreneurial, competitive entry redirects resources from industries in which their productivity is low, as measured by consumer eagerness and willingness to pay, towards industries or techniques in which their productivity is higher. Competitive entry and the threat of competitive entry bring about the lowering of product prices towards their lowest possible costs of production and alert incumbent producers to the possibility of lowering the costs of production and to the competitive necessity to lower product prices accordingly.

The contrast between the notion of competition in mainstream neo-classical theory and that in the theory of entrepreneurial discovery can most effectively be presented in terms of knowledge. Mainstream theory competition calls for knowledge as a *prerequisite*: without complete knowledge throughout the market, competition is imperfect. But, for the theory of entrepreneurial discovery, competition is the process *through which* knowledge is discovered and communicated. It was Hayek (1949: 92-106; 1978: chapter 12) who put his finger on this cardinal difference separating these two notions of competition. Whereas the mainstream concept sees competition as referring to one particular *state* of equilibrium, the dynamic concept of competition refers to a *process* through which disequilibrium states are gradually modified in the equilibrative direction. It is the difference between an imagined state of completely attained information throughout the system, and a process of discovery through which both activities and mutual information become more closely co-ordinated.

The close relationship between the dynamic concept of competition and entrepreneurial alertness has been explored in the literature of

the theory of entrepreneurial discovery (Kirzner 1973). It turns out that the two notions, dynamic competition and entrepreneurship, are two sides of the same coin. Every act of competitive entry is an entrepreneurial act; every entrepreneurial action is necessarily competitive (in the dynamic sense of the word). To compete is to act (or to be in a position to act) to offer buyers a more attractive deal, or to offer sellers a more attractive deal, than others are offering. To do so it is necessary to discover situations where incumbent market participants are offering less than the best possible deals, and to move to grasp the profits made possible by filling the gap so created by the incumbents. Such activity is strictly entrepreneurial. To act entrepreneurially is to enter a market with a new idea, with a better product, with a more attractive price, or with a new technique of production. Any such act necessarily competes with others.

In the theory of entrepreneurial discovery, competition can (apart from governmental restrictions on entry) be limited only as a result of monopoly ownership of unique and scarce resources (Mises 1949: 354-74). If an individual enjoys sole ownership over such a resource, he may be invulnerable to competitive entry, because potential competitors are precluded from access to the unique resource. Entrepreneurial discovery, in such cases, must necessarily be channelled into other productive activities for which the required resources are available to all willing to pay the market price.[8] Entrepreneurial activity is possible only to the extent that no resource monopoly obstacles exist to block entry. Dynamically competitive activity which involves, not duplication of *existing* offers made by others, but the innovative offering of *superior* opportunities to others is possible only because entrepreneurs are alert to the possibilities available through innovation.

Mises, Hayek and the Theory of Entrepreneurial Discovery

Thus the theory of entrepreneurial discovery emerges as a synthesis of complementary ideas developed separately by Mises and by Hayek. In section II we saw that Mises emphasised the entrepreneurial character of the market process, while Hayek drew attention to the character of that process as being one of mutual learning. We observed there that these two elements of emphasis turn out to be two sides of the same

[8] In any monopolised industry, in fact, the market process proceeds through entrepreneurial competition being re-channelled to other markets. The process through which the monopolist arrives at the monopoly price for his product is one in which activity in the production of possible substitute products, and activity in markets for alternative uses of other, non-monopolised resources, impinge on the prices on the basis of which the monopolist calculates his own pricing policy.

coin, a coin which represents an Austrian paradigm, sharply at variance with the mainstream neo-classical paradigm. This observation can now be reviewed.

The key to appreciating the complementarity between the Misesian and the Hayekian insights is the distinction to be drawn between the discovery so central to the Austrian approach, and the deliberate search which finds its place in the mainstream neo-classical approach. Mainstream theory has developed the important theory of search, significantly enriching the realism of the theory. Recognising the ubiquity of imperfect information, search theory ingeniously incorporates into the mainstream paradigm the possibility of imperfect information. It assumes that those whose information is incomplete know how much information they lack, that they know the value to them of the missing information, and that they know precisely how (and at what cost) it is possible to obtain the missing information. Mainstream theory is then able to 'explain' exactly how much additional information will be obtained, through deliberate, cost-benefit-calculative search. Obtaining information in this mainstream approach is a special kind of production activity, an activity which can and is, therefore, incorporated into the enriched equilibrium picture which search theory makes possible. The discovery central to the Austrian approach is entirely different.

The difference is between the unawareness which is corrected in the course of entrepreneurial discovery, and the imperfect information which is completed in the course of deliberate search. The latter kind of ignorance is an ignorance deliberately chosen, as it were; the agent knows exactly how much information it is worth acquiring. The information which he deliberately refrains from acquiring is simply not worth the cost of acquisition. The ignorance with which he remains is, from this neo-classical perspective, *optimal* ignorance. But the unawareness corrected in the course of the entrepreneurial discovery process is an unawareness of which the agent is himself utterly ignorant. This ignorance is not 'justified' by the high cost of deliberate learning; it is not justified at all. It is simply the expression of one having unaccountably failed to notice what is, in effect, staring one in the face.

Entrepreneurial discovery represents the alert becoming aware of what has been overlooked. The essence of entrepreneurship consists in seeing through the fog created by the uncertainty of the future. When the Misesian human agent acts, he is determining what indeed he 'sees' in this murky future. He is inspired by the prospective pure-

profitability of seeing that future more correctly than others do. These superior visions of the future inform entrepreneurial productive and exchange activity. The dynamic market process is made up of such profit-motivated creative acts in regard to the future.

In so acting, the Misesian entrepreneur drives the market process which reflects the flow of new discoveries these entrepreneurial visions have uncovered. If all exogenous change (in consumer preferences, resource availability, and technological possibilities) could be suspended, this dynamic, entrepreneur-driven market process would proceed until all uncertainties, arising out of unawareness of what others are able and willing to do, would gradually become resolved. In emphasising the entrepreneurial character of the Misesian market process, we are at the same time drawing indirect attention to the Hayekian mutual-discovery aspect of that very same process. While certain elements in Hayek's expositions of the 1940s do seem to differ from elements emphasised in Mises's expositions of that same decade, an entrepreneurial discovery theory of the market process can be developed which draws on the complementarity between the Misesian and the Hayekian insights.

The Theory of Entrepreneurial Discovery and the Mainstream Neo-classical Paradigm

It might be argued that the theory of entrepreneurial discovery provides crucial, badly needed *support* for neo-classical equilibrium theory, which does a superb job in explaining the conditions fulfilled once all the co-ordinative steps taken in the course of the market process have been completed. But, because it does not of itself account for the process through which such co-ordinative steps come to be taken, it needs the contribution of the theory of entrepreneurial discovery. In this way, it might be argued, Austrian theory supports the mainstream neo-classical approach.

For many workaday purposes in applied economics, mainstream equilibrium theory offers a useful short cut to understanding what happens in markets. In considering what the consequences are of specific governmental interferences in markets (for example, in seeing how price ceilings generate shortages or minimum prices generate surpluses), the Austrian economist is likely to find himself using the same simple Marshallian supply-and-demand diagrams as his neo-classical colleagues. The technique of comparative statics analysis has for many decades been a simple but powerful tool for the applied economist. Nothing in this paper is intended to denigrate the possible

usefulness of mainstream equilibrium theory to serve as the algorithm for roughly identifying the consequences of specific kinds of exogenous change. It may indeed seem that the theory of entrepreneurial discovery provides not much more than a helpful explanatory footnote, as it were, to mainstream theory (Vaughn 1994: 139ff). But in fact the relationship between the theory of entrepreneurial discovery and mainstream neo-classical theory can and should be seen in a different light.

If the purpose of economic theory is seen as no more than offering short cuts to statements linking causes to effects, then 'black-box' theorising may appear adequate. But if the purpose of theory is to help us understand *how* the market economy works, things are quite different. For purposes of achieving understanding, a black-box 'theory' is no theory at all. It explains nothing, in the sense in which people usually understand 'explanation'. Thus the theory of entrepreneurial discovery provides far more than a moderately interesting supplement to mainstream equilibrium theory; it provides the explanation which is lacking in mainstream theory.

As will be shown in the remaining sections of this paper, the theory of entrepreneurial discovery has implications which go beyond the simple satisfaction of scientific curiosity. The explanation which it provides drastically alters the way in which significant features of the market economy and of contemporary economic reality are understood or appreciated. The differences in understanding should, in turn, entail important modifications both in the 'moral' evaluation of key features of capitalism, and in the formulation of practical economic policies to permit the economy to reap its greatest potential in efficiency and in prosperity.

V. NEW PERSPECTIVES PROVIDED BY THE THEORY OF ENTREPRENEURIAL DISCOVERY

Understanding the market process as a systematic, error-corrective sequence of profit-inspired entrepreneurial discoveries, continually reshuffled and redirected as a result of the ceaseless impact of exogenous changes, should drastically alter our appreciation of key features of capitalism. In this section a number of examples of such alterations are examined.

A good deal of the argument stems from refusal to accept perfectly competitive equilibrium as an ideal. Many features of real-world markets which appear, from a perfectly competitive-ideal perspective, to be direct evidence of inefficiency, turn out to be wholesome features of a vigorously and dynamically competitive world. So-called 'imperfections' of competition emerge as crucial elements in the market process of discovery and correction of earlier entrepreneurial errors. Each example in this section demonstrates how the Austrian view of the competitive process contrasts with the norm of perfect competition.

The Economics of Advertising

Advertising cannot easily be fitted into the perfectly competitive equilibrium model. Hence it has been seen as a generally harmful and wasteful phenomenon, responsible for serious divergence of capitalist performance from the efficiency conditions in the perfect competition model. It appears to be expenditure of resources designed to manipulate consumer preferences, shifting the demand curves for given advertised products to the right. Such manipulation can only benefit firms in monopolistic or quasi-monopolistic situations. Further, advertising adds insult to injury by requiring consumers to pay more for the privilege of buying commodities which they would not want in the absence of manipulation.

Neo-classical theory recognises that advertising may perform a productive role in providing consumers with useful information (for which they may be entirely willing to pay). There may be sound economic reasons why this information is provided by those with an interest in promoting sales of the advertised product (rather than by impartial, disinterested market purveyors of information). But it hardly explains the enormous volume of advertising, and especially its provocative, attention-grabbing, shrilly persuasive character. How-

ever, it is the analytical framework of the neo-classical paradigm which prevents critics of advertising from recognising its important role in the entrepreneurial discovery process. This paradigm has led critics to see advertising as decisively refuting the notion that under capitalist market constraints and incentives, producers are governed by consumer sovereignty.[9]

The theory of entrepreneurial discovery opens up a new perspective into which advertising can be fitted far more easily and in which it fills a different role. In order to serve the preferences of consumers, producers have to do far more than merely fabricate and make available the goods they believe consumers desire most urgently. They must do more, even, than to make available the information they believe consumers need to acquire and appreciate the goods on offer. After all, the entrepreneurial discovery perspective shows that mere availability does not guarantee that those needing information will have it. Even if information is staring them in the face they may simply not notice it, and remain unaware that there is anything further to be known.

It is therefore necessary for producers, intent on winning the profits from innovatively serving consumer preferences, also to *alert consumers* to the availability and the qualities of goods. Clearly there is a role for advertising beyond 'providing information in response to consumer demand.' There is, in addition, a role for advertising to grab the attention of potential consumers and direct them both to the information and to the goods that are available. This information may be such that, once aware of the goods, consumers may wish to buy them. But their demand may not yet be active as long as they remain unaware of their existence.

Such arguments may be presented in different terms. Mainstream theory sees consumers entering the market-place with given demand curves for each product. The success of the market in serving consumers is then judged by its success in responding to these demands. Advertising by producers is therefore immediately suspect, because its function appears not to satisfy the given demand, but rather to manipulate those demand curves better to suit the profit-seeking motives of the producers.

But from the Austrian perspective, the notion of demand cannot be given coherence unless the consumer is aware of the buying

[9] This has been repeatedly argued, for example, by Professor Galbraith: see Galbraith, (1958: chapter 11; 1967: chapter 18; 1973: chapter 14).

opportunities he faces. If a consumer has, say, never seen a pair of gloves and has no inkling of their existence or purpose, it is meaningless to speak of his demand curve for gloves. Yet we would not deny that an innovative, imaginative and creative entrepreneur who invents gloves, produces them, and offers them to satisfied customers, has correctly anticipated their demand for gloves. Surely we would agree that this entrepreneur has served consumer sovereignty, broadly understood.

The notion of 'serving the consumer' must be broadened to mean fulfilling consumer preferences, not as they were before the entrepreneur began his activities, but as they will be once the entrepreneur has made consumers aware of his product. The idea of 'manipulation of consumer demand by producers' then becomes unclear. It is part of the producer's function to acquaint consumers with what has been made available to them. So it becomes virtually impossible to distinguish in practice between selling activity designed to persuade consumers to buy something which they would not wish to buy and 'selling activity'[10] designed to make consumers fully aware of the qualities of the product which satisfies a demand of which they were previously unaware.

The provocative, attention-grabbing character of modern advertising is easily understandable as part of the efforts of producers, not only to make goods available to consumers, but also to ensure that consumers are aware of what is before them. The entrepreneur-producer must, in addition, be entrepreneurial enough to recognise that effort must be expended to awaken potential customers to new preferences. To dismiss such an argument as cynical sophistry would be to ignore two factors.

First, in a world of complexity, change and uncertainty, it is inevitable that consumers *are* imperfectly aware of the qualities and promise of the multitudes of goods. The need to alert consumers to *what they do not know that they do not know*, is very real. *Second*, to interpret advertising effort as primarily designed to persuade consumers to buy what they really do not want, raises an obvious difficulty. It assumes that producers find it more profitable to produce what consumers do *not* want, and then to persuade them to buy it, with expensive selling campaigns, rather than to produce what consumers do already in fact want (without need for selling effort). While producers may make errors of judgement, and may then see advertis-

[10] Elsewhere the writer has pointed out that this kind of 'selling activity' is not conceptually distinguishable from a broadly understood notion of 'production activity.' See Kirzner (1973), chapter 4).

ing as a way of minimising losses from having produced the wrong products, it seems highly implausible that the volume of advertising we observe can be explained in this way.

The entrepreneurial discovery perspective illuminates the obviously *competitive* character of modern advertising, which is difficult to appreciate within the neo-classical framework. From the mainstream perspective, advertising makes sense only as a weapon in the arsenal of the monopolist. From the perspective on advertising described here, however, advertising is plainly a tool *with which to compete*.

Once we see advertising as an activity through which entrepreneurs alert consumers to new goods and to qualities which the consumers may value highly, advertising appears as simply one more avenue for competitive entrepreneurship. Where two entrepreneurs have correctly anticipated the urgency of consumer eagerness to buy gloves, a new avenue opens for them to compete in serving the consumer. The producer who judges more correctly what kind of dramatic advertising message will best awaken consumer interest has the more successfully served those consumers. In exactly the same way as glove manufacturers compete in selecting those features (such as colour choice, style, durability and so on) most likely to appeal to glove consumers, they compete also on the most effective (and most cost-effective) way of attracting consumer attention. Advertising is thus an activity in which entrepreneurship is required. Apart from special cases (in which, perhaps, government regulation has given one producer unique access to advertising media), such entrepreneurial activity is essentially competitive because no one advertiser can prevent competing producers from advertising *their* products.

None of this can guarantee that each and every advertising message is necessarily truthful and in the consumers' interest. But it does point to the superficiality of sweeping attacks on the economic role of advertising. It demonstrates also that the entrepreneurial discovery perspective presented in this paper has important consequences for the way in which we 'see' significant features of the market economy.

The Economics of Anti-trust

An important alteration in approach to anti-trust policy is entailed by the insights of the theory of entrepreneurial discovery.

Laws attempting to prevent the emergence of (or to curb the use of) monopoly power antedate mainstream neo-classical theory. Consumer fear of monopoly power does not depend on the dominance of

the model of perfectly competitive equilibrium. But modern anti-trust policy draws upon that model for much of its intellectual ammunition. If one begins from the premise that complete allocative efficiency depends upon the attainment of the conditions necessary for perfect competition, any departure from those conditions appears as a threat, not merely to consumers who might be subjected to 'higher' monopoly prices but also to the allocative efficiency properties of the entire market system. The extraordinarily demanding conditions required for perfectly competitive equilibrium render mainstream neo-classical economics not so much a body of market theory demonstrating the efficiency of real-world capitalism, as one demonstrating its departures from allocative efficiency. Vigorous anti-trust legislation and enforcement came, therefore, to be seen by defenders of the market economy steeped in the mainstream paradigm, as steps urgently needed in order to *defend* the capitalist system against criticism of its otherwise non-competitive character. But the theory of entrepreneurial discovery throws a different light on such issues.

Section IV explained that in the theory of entrepreneurial discovery the relevant notion of competition depends on the fulfilment of only one condition – unhampered freedom of entrepreneurial entry into any and all sectors of the market. So long as no potential entrepreneur finds himself blocked from carrying out and profiting from any entrepreneurial venture he initiates, every activity undertaken in the economy is taken under the threat of the competition of others, and itself offers competitive challenge to others.

The social advantage provided by dynamic competition is the incentive it offers for the discovery and correction of earlier entrepreneurial errors. This social advantage does not consist in an assurance of 'optimal' allocation of resources. It consists of a systematic process of discovering and correcting entrepreneurial errors, especially errors which have left open opportunities for as yet unexploited mutual gain through trade among market participants. Consequently, departures from the optimality conditions of perfectly competitive equilibrium are not a threat to any relevant notion of economic efficiency. Equilibrium is not an attainable ideal, nor are perfect or 'near perfect' competition attainable. What is important is to ensure that opportunities for mutual gain are rapidly noticed and exploited; that market participants are not misled by over-optimism or by over-pessimism to undertake activities which they will subsequently regret. Dynamic competition offers the incentive and the pressure which alert entrepreneurs to the opportunities created by such errors of over-optimism and over-pessimism.

A single producer who enjoys privileged protection against the entry of other potential entrepreneurs enjoys a monopoly position. A single producer not protected against entry of potential competitors does not constitute a monopoly in the relevant sense. It is true that a single producer is confronted by a downward sloping demand curve, because the demand he faces *today* is the demand of the entire market, which is downward sloping. So it is certainly likely that such a single producer will be able to exercise control over price. But such 'power' over price does not threaten the competitive process because it can be exercised only with full awareness that raising the price may in fact simply invite new producers to compete in 'his' market.[11] The shape of the demand curve facing a producer at a given point in time has virtually nothing to do with the competitive character of the market for his product.

Only a barrier against entrepreneurial entry into a favoured sector can confer a relevant monopoly position upon the agent engaged in that activity, deflecting potential entrepreneurial discoveries into other areas. Such a barrier can be created by governmental grants of monopoly to favoured individuals or groups; it may also arise through sole ownership of a uniquely essential ingredient for a production process.

In the absence of such a barrier, even if only a few producers (or even only one) are active in a particular industry, there is no monopoly power in the relevant sense. No producer is sole owner of the capacity of entrepreneurial alertness. The fact that only one producer has chosen to enter this line of production simply means that other entrepreneurs have either failed to see the profit opportunities that the producer has correctly seen, or that *they* have correctly understood that no such profit opportunity exists. In the process of discovery entrepreneurs pursue opportunities which they see. This process is not in the slightest impeded by the downward slope of the demand curve which momentarily faces a single producer who enjoys no protection against competitive entry.

Even more compelling, entrepreneurial competition takes the form, not of producing a product identical to that produced by a single producer, but of producing other products competitive with it. Ultimately, of course, all products compete with each other. In a world of

[11] This of course means that the demand curve that confronts this single producer is subject to drastic modification through competitive entry. It is no longer true, simply and without qualification, that he faces the entire market demand curve for the product he sells.

scarce resources, resources allocated to the satisfaction of one set of consumer desires have been diverted from the satisfaction of other consumer desires. In buying the resources needed to produce any one good, an entrepreneur has succeeded in competing away these resources from other possible uses. When a producer, not enjoying protection against competitive entry, finds himself as sole producer he still has to worry about the activities of competing entrepreneurs. They are channelling their energies and their alertness into producing *other* products, which are competing for consumers' attention also. Inter-product competition will not guarantee horizontal demand curves facing each producer. But it offers assurance that errors made in the identification of the most urgently needed consumer products (and/or of the most easily accessible resources) will tend rapidly to be noticed and exploited by alert, competing entrepreneurs.

This view of competition casts doubt on the idea of government policy designed to create or maintain competition. That idea developed out of a conviction that, without such a policy, market competition might degenerate into monopoly or near-monopoly. Economies of scale might, for instance, promote mergers among firms in an industry, pushing the structure of that industry further and further away from the perfectly competitive pattern. Without steps to prevent such mergers, the structure of an industry might easily become non-competitive. Similarly, even without mergers, collusion (tacit or explicit) among large firms in an industry might result in near-monopolistic pricing policies. Active anti-trust legislation and enforcement therefore seem to be required to create and to maintain competitive structures, and to avoid collusion. The enormous literature on anti-trust economics that grew up over the best part of this century was based, for the most part, on these general presumptions. The entrepreneurial discovery perspective seriously challenges these presumptions, or at least their relevance for industrial policy.

From that perspective it is quite clear that (except in the extraordinary circumstances of single ownership of a uniquely essential scarce resource needed in the production of an important consumer good, for which there are no reasonably close substitutes) no special governmental legislation or enforcement activity necessary to ensure the dynamically competitive character of the market process. Freedom of entry (that is, absence of privilege) is the only requirement. In most instances of blocked entry, the source is grants of governmental privilege or governmental obstacles to entry (such as licensing requirements). The *only* government action needed to ensure the dynamically

competitive character of market activity is to remove all such government-created obstacles.

The market itself is unable to erect such obstacles against entrepreneurial entry. Collusion among 'dominant' firms in an industry (unless it takes the form of effectively monopolising the control of essential scarce resources), while it may appear to be effective in keeping up prices, is incapable of preventing entry. Any attempt to keep prices collusively high will be undertaken with awareness of such competitive threat.

Certainly, collusively-engineered high prices are inconsistent with perfectly competitive equilibrium. But they do fit the pattern of dynamic entrepreneurial competition; they emerge out of free competition among unconstrained entrepreneurs. Outright merger between 'dominant' firms in an industry may indeed create a single-large-firm industry, but entry by others is not blocked by that circumstance alone. If the size of such a large firm permits economies of large-scale production which potential entrants may not be able to match, that does not constitute an entry barrier. Quite the contrary; it is desirable that such economies should be reaped through alert entrepreneurial action. Merger activity motivated by the prospect of lowering costs is precisely the kind of competitive entrepreneurship of which the market discovery process consists.

This view of the role of competition in markets casts anti-trust activity not as helpful public policy designed to improve the efficiency of the market by limiting its divergence from the competitive ideal. On the contrary, anti-trust activity emerges as a well-meaning but clumsy interference in the market process, which has the effect of *hampering* competition. This paradoxical conclusion follows because blocking a merger, for instance, means blocking a possibly more efficient entrepreneurial venture. Previous processes of production had failed to take advantage of available economies of scale. Entrepreneurial alertness to the profits to be grasped by innovating a large-scale process of production inspires a merger. Governmental obstacles to such a merger are clearly blockages of entrepreneurial entry. What is designed to enhance competition turns out, in fact, to slow down or prevent competitive entry.

Scepticism about conventional anti-trust policy is not the exclusive prerogative of the entrepreneurial discovery approach. Much good sense has entered professional understanding of the nature of real-world competition and the potential threat to its healthy operation which conventional anti-trust policy represents. But, within the main-

stream neo-classical framework, it is difficult consistently to defend what appears as non-competitive industrial concentration. The entrepreneurial discovery approach offers a consistent theoretical framework within which to place the dynamic character of the competitive process. To encourage the spontaneous dynamism of the competitive process what is required is not large numbers of small producers producing exactly the same product in exactly the same way; the requirements are freedom of entrepreneurial entry and the elimination of privileges to incumbent producers that might switch off alertness of potential competitors to superior innovative possibilities.

The Economics of Welfare

Along with the development of twentieth-century neo-classical price theory, there developed modern welfare economics. There has never been a time when economic theorists have not sought to evaluate the impact upon society's economic well-being of specific pieces of legislation or policies, or of major historical events. The objective has been to use economic theory to understand how economic phenomena affect some index of social economic well-being.

Changes have, of course, occurred in what economists have understood as the relevant interpretation of 'economic well-being.' Classical economics, beginning with Adam Smith, saw the 'wealth of nations' as an aggregate of objectively measurable items: the economic 'goodness' of a policy could be measured by its impact upon the nation's wealth.

With the infusion of subjectivist insights into early neo-classical (late nineteenth-century) economics (and especially its recognition of diminishing marginal utility), aggregate wealth could no longer be accepted as a simple index of a society's economic well-being. Mainstream economic theory sought to replace aggregate wealth with the more abstract aggregate economic 'welfare'. Extensive and subtle discussions on how to define aggregate economic welfare (especially how to deal with interpersonal utility comparability) created a significant literature during the middle third of this century. The notion of 'Pareto optimality' – a pattern of resource allocation and consumption such that no opportunities exist for a reshuffling of resource uses and consumption patterns that might benefit one or more members of the economic system without harming anyone else – came to be widely used in discussions of economic efficiency.

Modern welfare economics defined with considerable sophistication the conditions under which a market economy in perfectly

competitive equilibrium satisfies the requirements for Pareto optimality. Mainstream neo-classical economists who have ascribed social-efficiency properties to the capitalist system have generally treated that system as a reasonably acceptable approximation to the perfectly competitive state of affairs. Mainstream economists who have found fault with the capitalist system on social-efficiency grounds, have done so through pointing out the features of the system which violate the conditions required for perfectly competitive equilibrium.

Recognising one salient feature of mainstream economics allows us to appreciate how entrepreneurial discovery opens up a new way of evaluating the economic effectiveness of alternative institutional arrangements. Mainstream welfare economics assesses the economic well-being of a society by adopting the perspective of an omniscient observer. Looking down on an economy, seeing exactly where every unit of resource is being allocated, knowing exactly what the resource supply functions and the consumer demand functions are, welfare economics sets out to pin down the conditions under which an omniscient, omnipotent, and benevolent leader of society, intent upon improving the economic well-being of society, would have nothing left to do. This reduces the economic problem facing society to exactly the same as that defined by Lionel Robbins as the economic problem facing the individual agent – to allocate given resources among given alternative ends (1932: chapter 1).

It was Hayek (1949: 77) who pointed out most emphatically, however, that this is *not* the economic problem facing real-world economies where information is widely scattered. The real economic problem is bringing to bear upon decision-making all this available, scattered information – mobilising all the bits of knowledge which exist in decentralised form throughout the economy. *This* problem is one which would have to be solved *before* one could even consider the allocation-of-social-resources problem which mainstream textbooks assure us is *the* economic problem facing society. As Hayek pointed out, the perspective from which mainstream economics proceeds rules out by assumption any consideration of the prime economic problem which societies face.

Hayek's critique of the mainstream notion of the economic problem was not intended by him as a direct attack on the foundations of modern welfare economics. He was pointing out that, if we are in any way concerned to improve the economic well-being of society, it will not do to proceed as if the prime obstacle to achieving that goal simply does not exist. He was inspired to point this out as a result of

his debates with socialist economists who failed to recognise the contribution the market makes to mobilising scattered information. Hayek was drawing attention to the blame attached to mainstream theory in simply assuming that this problem did not exist. But he was indirectly also offering a powerful and profound critique of the mainstream theory of economic welfare.

Once it is realised that the relevant information is scattered among many minds, it becomes apparent that the notion of social efficiency central to modern welfare economics is no longer coherent. A social efficiency objective implies a single mind to which all resource supply conditions and all consumer attitudes are simultaneously given. Otherwise, there can be no coherent notion of a relevant optimum. The entire notion of a 'social choice' presumes, in principle, the relevance of imagined omniscience. In drawing attention to the dispersed information problem Hayek was pointing out that the fundamental ideas at the basis of modern welfare economics lack coherence and relevance for the world in which we must live.

The entrepreneurial discovery approach exposes this fatal flaw in modern welfare economics. Indeed, Hayek's own indictment of mainstream theory for falsely characterising the economic problem facing society (because it fails to consider the problems raised by dispersed information) is effective only within the entrepreneurial discovery perspective. That is so because a hard-boiled modern neo-classical economist might be inclined to shrug off Hayek's problem of dispersed information.

Such an economist might argue that Hayek's observation is not fatal to a neo-classical view which sees the economy as facing a social choice problem, in exactly the same way as the Robbinsian individual agent faces an allocation problem in his quest for individual efficiency. What must be known, to the social agencies charged with achieving social efficiency, need not be specific details of supply conditions and consumer preferences. All that would need to be known, in a world of dispersed information, would be: (i) the costs required in order to acquire, through search, central command over that information, and (ii) the value to society of the information now dispersed (but potentially available to the central social economic agency at the known costs of search). Such information (concerning search costs and information values) *must* be assumed available within the mainstream neo-classical framework, as explained in earlier sections of this paper. So, the neo-classical economist might maintain, the social efficiency paradigm *can*, after all, still be applied to the Hayekian world of

dispersed information.

But the entrepreneurial discovery approach, with its emphasis on the kind of ignorance which cannot be reduced by deliberate search (because the agent is unaware of his ignorance, or at least unaware of how his ignorance could be reduced), demonstrates the insurmountable difficulties for mainstream theory raised by Hayek's insights. Those difficulties defy any effort to fit the situation into a Procrustean bed of neo-classical constrained maximisation. An imagined social agent lacking omniscience would simply not be aware of how much dispersed information he lacks, of where to look for it (even if he realises his ignorance), or what questions to ask in pursuing a hypothetical search.

At the same time, the entrepreneurial discovery approach offers the germ of a potential reconstruction of welfare economics. Once we understand the difficulties constituted by unknown ignorance, we realise the possibility of evaluating economic policies and/or historical events, not in terms of the flawed notion of social efficiency, but in terms of a different criterion – ability to encourage entrepreneurial alertness to valuable knowledge the very existence of which has not previously been suspected.

The entrepreneurial discovery approach focuses on the social advantages conferred by the competitive market process during which earlier errors become translated into pure profit opportunities, which, in turn, attract entrepreneurial alertness and are thus corrected. The social advantages thus achieved do not constitute 'social optimality' as defined from the perspective of imagined omniscience. They constitute instead a co-ordinative process during which market participants become aware of mutually beneficial opportunities for trade and, in grasping these opportunities, move to correct the earlier errors.

Focusing in this way on *co-ordination* as the criterion for evaluating the successful functioning of economic institutions, should not be misunderstood. The term 'co-ordination' suffers from some ambiguity. It *can* refer to a state of affairs in which all conceivable plans of all potential market participants *are already* in full co-ordination with one another. Such a state of affairs would be achieved, for example, in perfectly competitive equilibrium, thus returning us to the Pareto optimality criterion.

The term 'co-ordination' is used here to refer to the *co-ordinating process*. An important dimension of proper economic functioning is the sensitivity with which a society's institutions reveal when avoidable, wholly unnecessary errors have been made. We can hope, therefore,

to develop ways of assessing the comparative success of alternative institutional arrangements in this regard and of identifying the impact of specific pieces of legislation. We may not have any coherent notion of global well-being that can withstand a methodologically individualistic critique. We may not have any coherent notion of global efficiency that can withstand a Hayekian critique based on the dispersed nature of information. But we can, nonetheless, recognise a supra-individual 'social' benefit bestowed by benign economic institutions and policies in stimulating the co-ordinative process of entrepreneurial discovery. This possible reconstruction of welfare economics can help us understand the inter-war debate about the possibility of rational socialist economic calculation.

The Economics of Socialism

One unfortunate consequence of the mainstream neo-classical approach to understanding markets has been to support socialist contentions that the efficiency advantages of markets can be relatively easily simulated under socialist central planning. This may seem paradoxical, since both admirers of the market and admirers of central planning have recognised neo-classical economic theory as the intellectual bulwark of the capitalist system. Yet it was neo-classical price theory that was skilfully applied by defenders of socialism to deflect von Mises's famous 1920 critique of the possibility of rational socialist economic calculation. One is reminded of the aphorism attributed to Abba P. Lerner: 'Marxism is the economics of the capitalist system; neo-classical price theory is the economics of the socialist economy.' The entrepreneurial discovery approach to understanding markets enables us properly to appreciate Mises's critique, and to recognise that the most celebrated of the socialist attempts to refute this critique in fact failed to understand it.[12]

In 1920, Mises pointed out that socialist planners, lacking the guidance provided by market prices for resources, would be unable to plan rationally (1920/1935). In choosing a method of production for a given project, for example, they would be unable rationally to choose that method of production which would be the most economical (that is, which would interfere least with the fulfilment of other desirable social objectives). Socialist production could certainly be undertaken, but socialist planners could not ensure that the array of outputs produced represented the most desirable possible array. The devastat-

[12] For a book-length treatment of this issue see Lavoie (1985).

ing implications of this critique were not lost upon socialist writers, and a vigorous inter-war debate ensued. We can focus on the work of Oskar Lange and of Abba P. Lerner, who (as mentioned in section II above) recognised the force of Mises's critique, but believed that it was possible to fashion a socialism that would be able to avoid the harsh implications of that critique for socialist efficiency.

Lange (1938: 55-129) was explicit in linking his suggested solution to the Misesian economic calculation problem to mainstream theory. He proposed a form of socialism in which non-market 'prices' for resources would be announced by the central economic authorities and used by socialist managers of state enterprises in exactly the same way as neo-classical theory sees owners of capitalist firms using market prices for resources. The socialist managers would be instructed to use these resource 'prices' in conjunction with the prices of their products to select output levels and methods of production that would maximise 'profit'. They would do so by aiming at precisely those same marginal equalities which neo-classical theory sees as being achieved by capitalist firms in competitive markets. The central economic authorities would periodically adjust the announced resource 'prices' upwards (or downwards) in response to resource shortages (surpluses) generated by the socialist managers' demands for resources under earlier resource 'price' announcements. In this innovative way, Lange believed, the socialist economy, by simulating the operation of the perfectly competitive capitalist market economy, would achieve the same allocation of resources as that resulting from the competitive market – while being able to fulfil the distributive and other goals of traditional socialism.

Mises and Hayek, who had in 1935 published two important essays (reprinted as Hayek (1935: Introduction and chapter 5)) supporting Mises in the economic calculation debate, did not concede that Lange and Lerner had responded at all usefully to their criticisms of the possibility of rational socialist planning. Nevertheless, the post-war literature somehow concluded that these criticisms of the possibility of socialist efficiency had been decisively refuted. The reason is the same as that which was responsible for Lange's solution, *viz.* that other writers, like Lange, were thinking in terms of the neo-classical equilibrium paradigm. Consequently, Lange was unable to grasp the full meaning of Mises's and Hayek's critique – which proceeded, at least implicitly, from an Austrian understanding of price theory in the entrepreneurial discovery approach.

Lange's solution for Mises's problem is to simulate the operation

of the competitive market imagined to be in equilibrium. Mises had argued that socialist planners, unlike capitalist entrepreneurs, are unable to use the prices of resources in order to calculate the most economical ways in which to achieve given goals. Lange's response was that announced prices could serve exactly the same 'parametric' function as served by market prices for resources in competitive equilibrium.

But Mises had not understood the role of market prices as serving such a parametric role at all. He had not seen the ability of capitalist entrepreneurs to use resource prices as in any way depending on the properties of prices under competitive equilibrium conditions. Quite the contrary, he understood the resource prices which emerge in markets as expressing the entrepreneurial bids and offers of market participants competing with each other under disequilibrium conditions. In bidding for a resource an entrepreneur is both guided by the judgement of the entrepreneurs with whom he is competing, and expressing his own judgement concerning the future value of his projected product to tomorrow's consumers (to whom he hopes to offer his product). There is nothing in Lange's scheme of simulating perfectly competitive equilibrium markets under socialism remotely corresponding to the alert, profit-stimulated entrepreneurial judgement which is both guided by market prices and itself drives the course of such prices. To imagine that Lange's scheme could simulate capitalist efficiency is to grossly misunderstand the way in which capitalist markets work. The virtue of the entrepreneurial discovery approach is that it clearly identifies the flaw in Lange and Lerner's response to the Misesian critique of the possibility of socialist efficiency.

The demise of socialist economic systems in Eastern Europe during the past decade has focused renewed attention on the Misesian critique. It is true that the Lange-Lerner proposed solution was never implemented in socialist practice. Nonetheless, the widespread conclusion in the post-war literature on comparative economic systems that the Misesian critique can, at least in principle, be met by appropriate simulation of neo-classical markets in equilibrium, makes it doubly important to appreciate the true content of this critique. Such an appreciation simply cannot be achieved within the mainstream neo-classical paradigm. The entrepreneurial discovery approach from which Mises's work proceeded illuminates Mises's real meaning.

Economics, Markets, and Justice

The entrepreneurial discovery approach offers insights into philo-

sophical discussions of the possibility of *justice* in a capitalist society. An understanding of the market economy which is based on seeing it, in mainstream neo-classical terms, as being in the competitive equilibrium state, is likely to arrive at sharply distorted philosophical conclusions in regard to capitalist justice. Philosophical conclusions are likely to be decisively shaped by the way the operation of capitalism is understood. Moving from a mainstream paradigm to an entrepreneurial discovery paradigm entails profound differences in philosophical judgements concerning the justice of the system. In order to rebut widespread philosophical condemnation of the market society on justice grounds, it may not be necessary to engage in philosophical disputation at all. It is simply necessary to correct mistaken ideas (taken unquestioningly from mainstream economics) concerning the positive economic operation of the system. Once these strictly economic-theoretic misunderstandings have been cleared up, the philosophical conclusions typically drawn from them are likely to collapse without further argumentation. In other words, moral judgements have been reached on the basis of a flawed understanding of the system being evaluated.

Criticisms of the market society on grounds of its alleged injustice traditionally proceed from a variety of concerns. The institution of private property is criticised; the inequality of incomes is criticised; effects of the price system are criticised. Our focus here is on criticisms of the justice of capitalism which arise from its permitting – indeed its resting upon – the possibility of pure entrepreneurial profit. The market system relies for its driving force on the profit motive. The justice of the system is often criticised on the grounds that profits have not been *earned* or deserved, that they are pure surplus captured at the expense of labourers and/or of consumers. Justice, critics maintain, requires that all gains received be *deserved*. A system in which the distribution of incomes includes a significant share of pure entrepreneurial profit cannot be just.

Critics of the justice of profits make a sharp (and proper) distinction between incomes received in return for services rendered (whether by one's own labour or by material resources justly owned) and pure profit. Incomes received for services rendered are considered to have been justly earned; they represent a *quid pro quo*. Even the return on invested capital (although often loosely called 'profit') may, at least for the non-Marxist critic of capitalism, be recognised as having been earned and deserved. But pure entrepreneurial profit – an amount received over and above the full value of all resource services

rendered – is seen as defying the traditional justifications offered for factor incomes.

Quite correctly, it is recognised that pure profit cannot be treated or justified *as a factor income*. The entrepreneur who pays out the sums needed to acquire *all* necessary inputs for a production process, and who is able to sell his output for greater sums, has captured thereby a pure gain, which does not correspond to a service rendered by any identifiable input. Such profit can appear to be derived either from 'exploitation' and/or deceit, or as being the result of sheer, undeserved luck. Regardless of the relative size of the pure profit share in market-determined incomes, because this 'undeserved' share offers the primary incentives for the operation of the entire system, that is sufficient in the eyes of critics of capitalism to render that system unjust. But the entrepreneurial discovery approach suggests otherwise.

That approach reveals a category of gain which is neither the deliberately aimed-at result achieved by the expenditure of productive resources, nor the wholly fortuitous result of pure luck: the gain is revealed and grasped through alert *discovery*. Within the neo-classical paradigm there can be no such category. Mainstream economics proceeds by fitting the economic phenomena of the market economy into a framework from which all but deliberately aimed-at results on the one hand, and the fruits of pure luck on the other hand, have been carefully excluded. This neo-classical world excludes all possibility of *surprise*. Explanation, in this analytical world, is achieved by attributing all phenomena to deliberately and correctly made choices between known alternatives.[15] Within such a framework there is no room for pure entrepreneurial profit. There is no opportunity, in such a world, to discover what one had hitherto not sought.

If the possibility of discovered gain is ruled out by the analytical framework employed, it follows that all questions of distributive justice boil down to questions of how justly to share *a given pie* (or, what amounts to the same thing, of how to share the given pie-ingredients). Either the pie we see (which is to be justly distributed) has already always existed (with just claims for shares of it somehow established by history). Or the pie we see has been produced, and just distribution requires that it be justly shared out among the owners of the ingredients (assumed always to have existed, with historically estab-

[15] Luck has a place, in a modified neo-classical world, only to the extent that the relevant probability functions are fully known. One may be the fortunate beneficiary of good luck. But since one knew exactly the chances one had of being lucky, good fortune is not anything that can be considered a genuine *surprise*.

lished title claims to them) combined in the pie-baking process. There is, in this world without discovery, no scope for considering how just principles can be applied to a pie (or its ingredients) which did not, for all relevant purposes, exist at all prior to its having been discovered.

It is the concept of discovery which permits and requires us to recognise that 'pies' (or their ingredients) may have *come into existence* as a result of acts of discovery. An act of discovery is not an act of deliberate production (out of known ingredients); nor is it simply the passive reaction to a stroke of pure luck. An act of discovery is one during which *one becomes aware* of a costlessly available gain. Clearly, pure entrepreneurial profit fits into the pigeon-hole reserved for such discovered, costlessly available gain. The entrepreneurial discovery approach, in recognising discovery as the driving force in the disequilibrium world, also recognises pure profit as a category that may be defensible, on justice grounds, along lines that would not be relevant in a world in which there was nothing left to be discovered.

Discovery relates to alert action which brings new things into the world *without expenditure of resources*. It differs from deliberate production in that production requires resources (whose value therefore tends to rise to the level of the value of what they produce, leaving no surplus for pure profit). It differs from what becomes available as a result of pure luck, in that the latter calls for no human action whatever. Discovered gain is gain that, despite its possible prior *physical* existence, was, as far as human cognisance is concerned, simply 'not there.' What brings it into existence, *ex nihilo*, is human (entrepreneurial) alertness. That act of alertly grasping what one sees is a creative act, since it instantaneously brings into existence what was previously, to all human intents and purposes, non-existent.

Claim to what one has 'created' in this fashion cannot be based on ownership of the resources which produced it: there were no such resources. This gain is not in any sense the fruit of a tree justly possessed. The gain may be claimed by its discoverer on the grounds that he has 'created' it by bringing it into existence, as it were, out of nothingness. Unlike the fortunate beneficiary of a stroke of good luck, the discoverer of a hitherto unnoticed desirable object *acted* to 'create' that object. *He* noticed it; no one else did so before he grasped the object he noticed. Discovery may take the form of alertly noticing how to produce, out of available resources, something desired. While the subsequent deliberate act of production is not an act of discovery, the *discovery of the opportunity* to gain through subsequent deliberate production, *is* creative.

The entrepreneurial discovery approach permits us to see pure entrepreneurial profit as *created* gain, the surplus value created by the alert entrepreneur who discovers the opportunity of converting resources valued by society at a low value, into products which society values more highly. The slice of pie grasped by successful entrepreneurs has not been sliced from a pre-existing pie at all; it is a portion which has been created in the very act of grasping it.

There certainly is room within the theory of entrepreneurial discovery for understanding incomes received in return for providing the productive process with the services of resources which one owns. And neo-classical marginal productivity theory, ever since John Bates Clark, has clarified the nature and the justice of such earned income.

But we live in an open-ended world, in which as yet unseen opportunities always exist for improving human well-being through the discovery of new resources or of new ways of deploying resources productively. So the creative character of the actions taken alertly to notice and to grasp these opportunities should be recognised. An enormous volume of pure entrepreneurial activity takes place in capitalist society; a theory of economic justice must be grounded in an analytical framework which can accommodate such activity, not in a framework built upon the premise that no scope whatever exists for such activity. The theory of entrepreneurial discovery drastically alters conventional conclusions regarding capitalist distributive justice.

VI. CONCLUSION

The purpose of a theoretical framework is to foster understanding of phenomena encountered in the real world. Any such framework necessarily abstracts from details of the real world in order to develop an explanatory model able to provide insight into the complexities of that world. Different explanatory models are designed to help us understand different facets of the world.

There is no doubt that important aspects of the market economy can be helpfully illuminated by mainstream neo-classical economics. But there are even more important aspects of the economy which remain obscure when the mainstream framework is applied. Among the important questions which that framework is, by its very construction, unable to answer, are: How do markets work? How are the individual decisions of millions of market participants able to become as co-ordinated as they are in the market economies we know? These questions are surely the most fundamental which arise when we consider the extraordinary prosperity achieved in market economies during the past two hundred years.

The theory of entrepreneurial discovery, derived from the Austrian tradition, offers a framework within which satisfying, coherent answers to these fundamental questions can be found. This theory enables us, at the same time, to 'see' important features of market economies in a different light from that provided by the mainstream approach. Deploying the Austrian insights provided by this approach can help avoid policy pitfalls, as well as satisfying our purely scientific curiosity about the way in which the world works.

REFERENCES

Chamberlin, E.H. (1956): *The Theory of Monopolistic Competition*, 7th Edition, Cambridge: Cambridge University Press.

Fisher, Franklin M. (1983): *Disequilibrium Foundations of Equilibrium Economics*, Cambridge and New York: Cambridge University Press.

Friedman, M. (1953): 'The Methodology of Positive Economics' in M. Friedman, *Essays on Positive Economics*, Chicago: University of Chicago Press.

Galbraith, John K. (1958): *The Affluent Society*, Boston: Houghton Mifflin.

Galbraith, John K. (1967): *The New Industrial State*, Boston: Houghton Mifflin.

Galbraith, John K. (1973): *Economics and the Public Purpose*, Boston: Houghton Mifflin.

Hayek, F. (1935): *Collectivist Economic Planning: Critical Studies on the Possibilities of Socialism*, London: George Routledge and Sons.

Hayek, F. (1949): 'The Use of Knowledge in Society,' reprinted in F. Hayek, *Individualism and Economic Order*, London: Routledge and Kegan Paul.

Hayek, F. (1978): 'Competition as a Discovery Procedure,' in F. Hayek, *New Studies in Philosophy, Politics, Economics and the History of Ideas*, Chicago: University of Chicago Press.

Ikeda, S. (1990): 'Market-Process Theory and "Dynamic" Theories of the Market,' *Southern Economic Journal*, July.

Kirzner, I. M. (1973): *Competition and Entrepreneurship*, Chicago: University of Chicago Press.

Kirzner, I. M. (1985): 'The Perils of Regulation: A Market Process Approach,' in I.M. Kirzner, *Discovery and the Capitalist Process*, Chicago: University of Chicago Press.

Kirzner, I. M. (1997): 'Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach,' *Journal of Economic Literature*, March.

Knight, F.H. (1921): *Risk, Uncertainty and Profit*, Boston and New York: Houghton Mifflin.

Lange, O. (1938): 'On the Economic Theory of Socialism: Parts I and II,' in B.M. Lipincott (ed.), *On the Economic Theory of Socialism*, Minneapolis: University of Minnesotta Press.

Lavoie, D. (1985): *Rivalry and Central Planning: The Socialist Calculation Debate Reconsidered*, Cambridge: Cambridge University Press.

Machovec, F. M. (1995): *Perfect Competition and the Transformation of Economics*, London and New York: Routledge.

Mayer, H. (1932/1994): 'The Cognitive Value of Functional Theories of Price' in

I.M. Kirzner (ed.) (1994): *Classics in Austrian Economics, Vol II: The Interwar Period*, London: William Pickering.

Mises, L.V. (1920/1935): 'Economic Calculation in the Socialist Commonwealth' in F. Hayek (ed.), *Collectivist Economic Planning*, London: Routledge and Kegan Paul.

Mises, L. von (1932/1960): *Epistemological Problems of Economics*, Princeton: Van Nostrand.

Mises, L. von (1949): *Human Action*, New Haven: Yale University Press.

Mises, L. von (1962): 'Profit and Loss' in L.V. Mises, *Planning for Freedom and Other Essays and Addresses*, 2nd Edition, South Holland, Ill.: Libertarian Press.

O'Driscoll, G.P. Jr and M.J. Rizzo (1985): *The Economics of Time and Ignorance*, Oxford: Basil Blackwell.

Robbins, L. (1932): *An Essay on the Nature and Significance of Economic Science*, London: Macmillan.

Shackle, G. (1972): *Epistemics and Economics: A Critique of Economic Doctrines*, Cambridge: Cambridge University Press.

Vaughn, K. I. (1994): *Austrian Economics in America: The Migration of a Tradition*, Cambridge: Cambridge University Press.

Vihanto, M. (1994): 'Introductory Essay: The Nature and Main Content of Austrian Economics,' in M. Vihanto, *Discovering a Good Society through Evolution and Design, Studies in Austrian Economics*, Turku, Finland: Turku School of Economics.

Other CIS Publications

Rising Crime in Australia

Rising Crime in Australia by Dr Lucy Sullivan provides a long-term perspective on crime. For much of the twentieth century crime rates were in decline or stable, but have risen alarmingly since the 1970s. Dr Sullivan uses time trends in other social factors as a source of possible explanation. She finds that changes in family structure and functioning – divorce, ex-nuptial birth, sole parenting, and women's employment trends – appear to be related closely to increasing crime, thus suggesting inadequate socialisation of children as a possible cause. Dr Sullivan concludes by considering some of the more fundamental cultural changes that may have contributed to higher crime.

[PM 39] ISBN 1 86432 027 3 (1997) 92pp. A$13.95 NZ$18.95

Taking Education Seriously

A Reform Program for Australia's Schools

Taking Education Seriously documents the difficulties of Australia's education system – poor performance but rising costs. The system's fundamental problem is that it is dominated by its producers rather than its consumers. In *Taking Education Seriously* Professor Ken Gannicott of the University of Wollongong provides an alternative, charter schools. Charter schools are still public schools, but they can be established by people outside the existing public sector – by parents, by teachers, by community organisations or other groups. Charter schools sign a performance contract with an educational authority, but are otherwise free of most regulation. Parents choose the school that best suits their children.

[PM 38] ISBN 1 86432 026 5 (1997) 204pp. A $24.95 NZ $29.95

Reforming New Zealand Welfare

International Perspectives

All around the world welfare reform is a major issue. In this book, Michael Jones, author of *The Australian Welfare State*, discusses rising welfare dependency, poverty, inequality and retirement financing in New Zealand. The book's international perspective makes it relevant well beyond New Zealand. Dr Jones draws on research from many other countries facing similar problems.

[PM 37] ISBN 1 86432 024 9 (1997) 200pp. A$24.95 NZ$29.95

Markets, Morals and Community

Few people today doubt the market's contribution to prosperity, but there are still powerful traditions opposing the market. The market's critics fear not so much that it will fail to create prosperity, but that it undermines morality and community.

Markets, Morals and Community contains three essays on these fears. Alan Hamlin's 'The Moral of the Market' looks at the various ways in which we could evaluate market institutions. Andrew Norton's 'The Market Mentality' assesses empirical evidence on what markets do to social ties. Herbert Giersch's 'Economic Morality as a Competitive Asset' suggests ways in which market mechanisms encourage moral behaviour.

[OP 59] ISBN 1 86432 020 6 (1996) 68pp. A $9.95 NZ $13.95

Other CIS Publications

Freedom of Speech in the Constitution

The High Court of Australia is rarely far from political controversy. In recent years both its decisions and its methodology have been the subject of intense scrutiny and sometimes harsh criticism.

Nicholas Aroney used the landmark Freedom Of Speech cases, decided by the High Court since 1992, to analyse the nature of judicial review. Although he is sympathetic towards the results the court achieved, he believes that ultimately their reasoning cannot be sustained.

[PM 40] ISBN 1 86432 032 X (1998) 216pp. A $24.95 NZ $29.95

Social Capital
The Individual, Civil Society and the State

Social Capital consists of four individual essays that present views on the role of social capital. **Andrew Norton** offers an introduction to some definitional issues concerning social capital and the related term 'civil society'. **Mark Latham** considers the importance of social capital for public policy in Australia, and the attitude that social democrats should adopt towards it. Gary Sturgess argues that social capital has been a vital factor in the rise of modern societies, and that it will remain essential under globalisation. Finally **Martin Stewart-Weeks** looks at the role of voluntary associations as institutions of social capital.

[PF14] ISBN 1 86432 029 3 (1997) 124pp. A$14.95 NZ$19.95

Working Youth
Tackling Australian Youth Unemployment

Youth unemployment is one of Australia's major social and economic problems, affecting over 300,000 young people between the ages of 15 and 24. Youth unemployment is the product of policies that have failed to produce economic growth, an excessively regulated labour market, the high on-costs of hiring extra staff, and shortcomings at all levels of the education system. Weakening family ties have exacerbated the problems of youth. *Working Youth*, by Graeme S. Durance and Helen Hughes, proposes reforms to the labour market and education that would begin the task of creating jobs for Australia's young people.

[PM 34] ISBN 1 86432 018 4 (1996) 96pp. A $13.95 NZ $18.95

State of the Nation
Statistical Indicators of Australia's Well-being

Lucy Sullivan, Barry Maley & Michael Warby

State of the Nation looks back over the past century and provides an important historical view on key indicators of Australia's performance.

It tells the bad news – rising crime, increased family breakdown, more unemployment, higher taxes – but also points to the successes of increased life expectancy, improving health, and rising average incomes.

This major CIS reference also provides a snapshot of social and cultural life in Australia, with a section on sport, TV, cinema and other forms of entertainment.

[S1] ISBN 1 86432 025 7 (1997) 124pp. A $19.95

The Centre for Independent Studies, Australasia's leading private policy research organisation, is financed by voluntary subscriptions and donations from individuals, foundations and companies.

You may assist the Centre in achieving its aims by becoming involved in its wide range of activites.

For more information please photocopy and complete the form on this page.

Alternatively you can visit our World Wide Web site at http://www.cis.org.au

PLEASE SEND ME MORE INFORMATION ON THE CIS:

Name:.....

Position:.....

Company:.....

Address:.....

.....Postcode:.....

Phone:.....

Send this coupon to:

THE CENTRE FOR INDEPENDENT STUDIES

PO BOX 92 ST LEONARDS 1590 AUSTRALIA

or Phone: (02) 9438 4377 • Fax: (02) 9439 7310

HOW MARKETS WORK

Disequilibrium, Entrepreneurship and Discovery

Mainstream economic theory starts from the assumption of 'equilibrium', under which markets are perfectly informed and perfectly competitive. According to the 'Austrian' tradition, however, this amounts to assuming away the most important economic problem: how do markets move towards equilibrium in the first place?

In this stimulating paper Israel Kirzner, a leading exponent of the Austrian view, argues that the mainstream neoclassical view leaves no room for creative discovery and the role of the entrepreneur. By seizing opportunities that exist in *dis*equilibrium, entrepreneurs can create wealth that otherwise would not have existed.

Building on the work of Ludwig von Mises and Friedrich Hayek, Professor Kirzner shows that the Austrian view of competition leads to important policy conclusions. In particular, he argues that governments should stop trying to achieve 'perfect' competition, and concentrate on allowing free entry to markets so that creative entrepreneurship can do its work.

ISRAEL M. KIRZNER

Israel M. Kirzner is one of the most distinguished economists writing in the 'Austrian' tradition. He received his Ph.D. at New York University, where he studied under the late Ludwig von Mises, and has been Professor of Economics there since 1968. His books include *The Economic Point of View* (1960) and *Competition and Entrepreneurship* (1973). In 1984 he delivered the inaugural John Bonython Lecture, published by the CIS as *The Role of the Entrepreneur in the Economic System*.

ISBN 1 86432 033 8

ISSN 0155 7386

ISBN 1-86432-033-8

9 781864 320336

THE CENTRE FOR INDEPENDENT STUDIES

Occasional Papers 64

A$9.95 NZ$13.95