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“... three ‘roots’ – love and respect for economic theory as an impressive analytical instrument, dynamic perspectives as an important key to an understanding of socio-political developments, and a problem-orientated approach in view of the economic and social ills of society – have remained the ‘prime movers’ of my work.” (Rothschild, 1992A: 473)

At least for a quarter of a century before his death in autumn 2010 Kurt W. Rothschild had been the unquestionable doyen of economics in Austria. He was an outstanding and original economic thinker whose voluminous work is of rare quality and versatility. However, his lasting and inspiring influence on generations of economists is not only due to his scientific performance and his important interdisciplinary contributions which outreached economics by taking into account of widely neglected factors, such as strategic behaviour, power, history and ethics. But, it was also due to his modest and upright character which made of him a devoted academic teacher, an influential empirical researcher and policy adviser, as well as a highly respected speaker in public forums.

Kurt W. Rothschild was born on October 21st 1914 in Vienna and died on November 15th 2010. He was the son of Ernst Rothschild, a salesman, and his wife Philippine. In 1933 Kurt W. Rothschild finished secondary grammar school and entered the University of Vienna to study law. His first choice would have been to become a physicist but that would have taken too much time. Due to the need to contribute to the family budget and the poor labour market conditions at the time he turned to study law with a prospect of wider job opportunities.

There existed no Social Science faculty at Austrian universities at that time. However, economics was an important part of the legal studies curriculum. Kurt W. Rothschild (1992: 472-3) was soon captured by this subject; on the one hand, he was attracted by the ‘beauties’ of analytical reasoning in economic theory but, on the other hand, his interest was also kindled from a political angle. Since already in grammar school he became acquainted with Karl Marx and the Austro-Marxist thinkers through his contact with the Socialist Youth

1 Large parts of this editorial rely on Altzinger (2011).
Movement. Moreover, there was also the stimulating atmosphere of Vienna in the inter-war period: First, from an economic point of view, the bleak economic perspectives, i.e. extremely high unemployment and poverty in these years of depression, as well as a deeply divided and unstable political environment, provided a strong challenge to take side even when you came from an apolitical family background as Kurt W. Rothschild did. Second, on the cultural side, Vienna had to offer a rich spectrum of activities and highly influential debates in the fields of psychology and sociology, the “Viennese Circle” of Philosophers, Austro-Marxism and Austrian Economics (Rothschild, 1999:3). Third, as political action is concerned, there was the policy of “Red Vienna”: The Viennese Social Democrats used their majority in the City Council and pursued an active municipal policy against the background of a hostile federal government by financing public housing and social and educational institutions through redistributive taxation (e.g. luxuries).

These were important years for Kurt W. Rothschild as he made clear in an autobiographical paper (1999: 3):

„I learned to see the world and its economic aspects not just as a harmonious progress of mankind (which so obviously it was not) but as a dynamic process of interacting interests and conflicts, of power and exploitation … This experience supported a viewpoint that in economic, political and social affairs things do not just “happen” and are not predetermined by “iron economic necessities” (as the opponents of the Viennese experiment continually argued). It has remained as a permanent reminder that activism and interventionism are possible and useful when conditions are regarded as unjust or undesirable, particularly in regard to basic human needs and extreme inequalities.“

It was this period in which he developed his great ambition to at least attempt to tackle social and economic problems. Although he pursued a tremendously wide range of topics during his life-long research effort he focused rather strongly on topics relevant for the whole society like unemployment or the distribution of income, wealth and economic and political power. Most of Rothschild’s political and social interests were formed during these economically and politically awful times of high unemployment, enormous poverty and the abrupt ending of a democratically elected government (which happened in Austria in 1934).

At the time when he finished his legal studies in 1938 Hitler invaded Austria. Thus, Rothschild as a Jew had to leave the country as soon as possible. He nearly never spoke about this tragic period of his life. Only in a biographical documentation in autumn 2009 on the occasion of his 95th birthday his wife Valerie told the interviewer that also Rothschild himself
had to do “floor cleaning” in 1938 in order to survive. He also never mentioned that his mother, who remained in Vienna, died in a concentration camp. Today, it seems almost inconceivable that a man who was pushed out of the country and to whom any appropriate academic job was refused after his return to Austria in 1947 for a very long time, neither ever accused anybody in Austria for his personal experiences nor refused to work hard for the country's reconstruction after World War II. For him it was just natural to make his contribution – seemingly regardless of what happened to him during all those years.

In August 1938 – after legal ways to emigrate were denied – Kurt and Valerie Rothschild fled through Switzerland to Scotland, where he was granted a scholarship. He studied Economics and Political Philosophy at Glasgow University (1938-1940) and continued as Lecturer till 1947. The years in Scotland probably were the most formative ones for Rothschild’s entire life. And this mainly in two respects. Firstly, in Scotland he discovered an entirely new world of economic thinking. And secondly, he was involved in a kind of democratic society which for an Austrian was hardly imaginable. Rothschild was introduced to the Keynesian ideas for the first time by studying the General Theory at Bale in Switzerland on his three-month stop on the way to Glasgow. He did tell his story on that many times. “Filled with the basics of Austrian-type micro-economic behaviourism I just couldn’t make head of tails of what I found in Keynes’ book” (Rothschild 1991, 6f.). For him it was just luck to discover at that time also the “Introduction to the Theory of Employment” by Joan Robinson. Otherwise he probably would have withdrawn from the study of economics. It was in particular Robinson's problem-oriented approach which was an “Eye- and brain-Opener” for Rothschild and permitted him “a far closer link between the intellectual adventure of economic theorizing and the social and socialist questions of the time than I could have found in my Wien days” (Rothschild 1991, 7).

The second and certainly not less important experience of Rothschild’s years in Scotland was the complete “openness” both at the university and in society.

„In Scotland I found democratic attitudes which had grown in centuries of democratic institutions … This openness towards other opinions and the readiness to cooperate with “other” sides when the situation seems opportune impressed me and has not only left its marks on my view of politics and political action but probably also contributed to the eclectic leanings in theoretical matters.“ (Rothschild 1999, 5f.)

Rothschild’s theoretical work in general is a form of creative eclecticism, drawing on neoclassical analysis where it is sensible and relevant (mainly short-term microeconomics)
but always investigating in its weaknesses (King 1994, 29f.). Rothschild always used different theories for different specific analyses. He never refrained to use neoclassical tools where they were applicable. However, he also always mentioned their weaknesses. Rothschild had a striking tolerance and openness to various theoretical approaches. His eclectic approach always tried to see what different theories have to offer and to analyse their strength and weaknesses. For example, Rothschild did not refrain from using utility theory for the analysis of micro-economic, short-run mechanisms of current economic activities on the one side, and Marxism-like approaches for the analysis of long-term dynamics of the socio-economic interplay of power and interests on the other (Rothschild 2002, 2004B). Besides this kind of eclectic theorizing there was one additional point which characterizes Rothschild’s methodological approach: the factor of complexity.

„I believe (and, of course, there are others who think the same way) that economics, like other social sciences, cannot be a “hard” science comparable to mechanics or other highly developed branches of the natural sciences. The extreme complexity of the social world as well as its dynamic, the poor quality of empirical data, and the difficulties of experimenting make any attempt at reaching high levels of “exactness” futile, if one aims at more than just the construction of ‘logical’ models.“ (Rothschild 1991, 12)

In 1947 Rothschild left the Glasgow University and returned to Vienna. He was already a highly respected economist with a number of important publications. Among others he published several papers in the most prestigious economic journal of that time ‘The Economic Journal’ (edited by John M. Keynes), such as “A Note on Advertising” (1942), “The Small Nation and World Trade” (1944) and his most influential paper “Price Theory and Oligopoly” (1947). But, despite of his reputation, like so many who returned after the war to help rebuilding the ruined intellectual infrastructure of the country, he was met with little support. Due to the narrowness of those people who managed the Austrian universities at that time (and many of them already since 1938 or before) and due to his Jewish roots he did not get an academic post. However, he could find a job at the Austrian Institute of Economic Research as a senior research economist. Interestingly, he was supported for this position by a recommendation from the later Nobel laureate August von Hayek (one of the founders of WIFO), who certainly did not support Rothschild’s economic point of view.

At WIFO Rothschild found a rather stimulating environment with a young team of economist who was strongly devoted to applied empirical research. Among others also Josef Steindl returned to Austria in 1950 and enriched the institute. Work at WIFO was rather strenuous since they were only few people and each of them had to write a report nearly every month
for WIFO’s monthly bulletin. In addition, Rothschild managed to publish a great number of highly regarded articles on Income Distribution, Wage Policy and Foreign Trade in these years as well as his “Theory of Wages” in 1954, which was of lasting influence on generations of economists. During that work at WIFO Rothschild detected “a healthy scepticism regarding the quality of data and a respect for good empirical work, even if it were ‘merely’ descriptive” (Rothschild 1991, 9).

In 1966 Rothschild was invited to become a “founding father” of the newly established University in Linz where a Faculty of Social and Economics Sciences was established and an entirely new curriculum in economics was introduced and had to be drawn up. Since Rothschild always had strong ambitions in academic teaching and research he accepted this offer. However, he never completely left WIFO where he worked as a consultant from 1966 until the end of his life. In Linz he had the advantage to develop the curricula in economics mainly by himself and with his colleagues. Hence he could apply his long-lasting experiences in economics starting from the Austrian School to Keynesian economics and much more than that. He emphasized in particular a strong interdisciplinary approach and managed an enormous teaching load. Similar to Glasgow and WIFO, he had to work rather hard since much of the new teaching stuff had to be completely reorganized. Reading his autobiographical notes concerning that time one is reminded once again of the “Scottish belief” that you made your own way in life and progress through hard work and education. As many anecdotes from colleagues and pupils of Rothschild testify he never shied back from hard work (e.g. Nowotny 2011).

Rothschild’s enormous teaching load at Glasgow during the 1940s and again at Linz for the new curricula during the late 1960s had one common denominator. In both cases (as well as in several other cases) he used this challenge for producing either text books or papers. At least four of his text books were outcomes of his lectures either at universities or shortly thereafter (Rothschild 1954, 1981, 1988, 1992B). This output-oriented work is an extraordinary characteristic of Rothschild and is underlined by the long list of publications of books and articles in renowned journals during this period of intensive teaching and thereafter; to mention just a few books of rather diverse subjects: “Arbeitslose: Gibt’s die?” (1990), “Ethik und Wirtschaftstheorie” (1992B), “Die politischen Visionen großer Ökonomen” (2004A).

Rothschild was not only open-minded in his research he was also open-minded throughout his live. He liked to discuss new developments in economics - theoretically, empirically and politically - with colleagues and students alike. At the University of Linz such discussions took place during the meanwhile well-known “Rothschild Coffee” which was an after-lunch
meeting at the department. Whenever you met Rothschild one of his first questions always was “What are you working on actually?” And instantly a stimulating and encouraging discussion was established. He was interested into nearly everyone’s topic of research and one could always learn quite a lot in the stimulating conversations with him.

Conference in Memory of Kurt W. Rothschild

On December 1st and 2nd, 2011 the Austrian National Bank (OeNB) jointly with the University of Economics, Vienna, the Austrian Economic Research Institute (WIFO) and the University of Linz organised a conference to commemorate the 1st anniversary of Kurt Rothschild’s death and honour his personality and contributions to economics.

We would like to thank all institutions who provided financial support for this conference, in particular the Oesterreichische Nationalbank (OeNB), the Austrian Institute of Economic Research (WIFO), the Chamber of Labour (AK), the Chamber of Commerce (WKÖ), the University of Linz and the University of Economics and Business, Vienna, the Office of the Federal Chancellor and the Ministry of Finance and the Ministry of Economy, Family and Youth.

This volume presents the papers that were given at this conference held at the headquarters of the Austrian National Bank. Nearly all of the speakers not only know Rothschild’s writings quite extensively, but most of them were students, colleagues and/or close friends to him. The conference was organized in three sessions.

In the first session Ewald Nowotny, the Governor of the National Bank who started his career as Rothschild’s Assistant, colleague and friend later on, positioned Rothschild between mainstream and critical economics and described him as “fascinating, but also challenging, even strict university teacher” who saw in the merit principle an important guiding principle of particular importance for students from an underprivileged background. Since they cannot draw on family relations and social networks but have to rely on their academic achievements.

2 The conference has been organized by Wilfried Altzinger from the University of Economics and Business, Vienna (WU), Alois Guger from the Austrian Institute of Economic Research (WIFO), and Peter Mooslechner from the Oesterreichische Nationalbank (OeNB).
John King (La Trobe University, Victoria, Australia) reviewed Rothschild’s biography and his impact on economics by drawing on his wide knowledge of the history of economics, professional interviews and personal reminiscences of Rothschild. Since King has edited a book of selected essays of Rothschild (1995) and conducted two long lasting interviews with him (1995, 2009) there are not many who know Rothschild and his work better than him. King summarizes Rothschild’s contributions as ‘An inspiration to generations of economists’.

The second session\(^3\) dealt with the topics of unemployment, distribution and financial markets. Amit Bhaduri (Jawaharlal Nehru University, Delhi, India) started with the remarkable notion that Rothschild’s paper on ‘Price theory and oligopoly’ (1947) “has influenced his thinking ever since”. In particular the open-ended nature Rothschild’s explanation concerning the price setting problem under oligopoly made a strong impression on him, he explained. Such outspoken appreciations have been heard not only at this conference but could be read also in papers of non-participating economists (Harcourt, G.C., 2011). In his paper Bhaduri discusses the relation between wages, profits and economic growth where he provides theoretical proof that the liberalization of the financial markets does have a profound influence on this setting.

The paper by Falkinger (University Zürich, Switzerland) addresses some fundamental problems of economic power, political power and the financial system. He develops a fully-fledged general-equilibrium model with some remarkable extensions in particular concerning uncertainty in financial markets and its severe macro-economic consequences. He concludes that regaining the primacy of policy in the regulation of financial markets requires two things: a clearly focused goal and global political leadership.

During the third session both micro and marco economic issues have been investigated. This session gives also evidence of the broad range of topics Kurt W. Rothschild has investigated.

Heinz Kurz (University of Graz, Austria) presented convincingly Rothschild’s multi-paradigmatic approach to economics and his position within the Austrian school of economists. In particular, Kurz discusses one of Rothschild’s main issues, ‘power in economics’, with respect to Smith, Ricardo, Marx and Keynes as well as the Austrian economists Menger, Böhm-Bawerk and Schumpeter. Interestingly, he characterizes the Austrian School of Economics as a rather heterogeneous but rebellious species, and Kurt W.

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\(^3\) Each of the papers in the 2nd and 3rd session has had also a discussant. These papers will not be commented on in this introduction but are published later on.
Rothschild, he added, is no exception to this rule. Kurz describes Rothschild as an eclectic who picked up from the different economic traditions what he considered to be sound and helpful.

Harry Bloch (Curtin University, Perth, Australia) and Mita Bhattacharya (Monash University, Australia) focus on the seminal paper of Rothschild on ‘Price theory and oligopoly’ which has been published in 1947, more than 65 years ago. Nevertheless, the main arguments of this paper are still valid and important today. The paper provides an instructive summary of the arguments of oligopoly and its impact on prices via many different channels, such as advertising, price rigidities, barriers of entry and in particular by their strong economic power. Oligopoly can be explained as a struggle for position, which requires an analysis that is much more than the application of an elegant profit-maximising calculus. In particular, it requires further examination of power, which remains a key element of the economy.

Finally, Jürgen Kromphardt (Technische Universität, Berlin, Germany) summarizes Rothschild’s main contributions on labour market theory, wages and prices and growth theory. This paper provides a broad overview of quite many contributions of Kurt W. Rothschild in these fields and discusses the issues rather instructively. He summarises Rothschild’s readings as a persistent integration of psychological, sociological and institutional factors in the economic analysis.

Additionally to his contributions to the academia Rothschild has also written and discussed quite many papers for and with policy advisers and politicians alike. These contributions of him have been discussed and reflected by a panel of six: two of them represent the main organizations of the Austrian social partnership, the Chamber of Labour (Günther Chaloupek) and the Chamber of Commerce (Christoph Leitl); two of them represent institutions which were (and still are) involved in the discussion on economic perspectives quite intensively, the Austrian National Bank (Peter Mooslechner) and the Austrian Institute for Economic Research (Karl Aiginger); the final two reflect opinions about Rothschild’s policy advises from the perspectives of academics (Herbert Walther, University of Economics, Vienna and Hans Brunner; University of Linz). All of them have been involved in many discussions with Kurt W. Rothschild on economic issues and therefore provide an excellent view of his arguing and reflections in such situations.

Finally, we would like to emphasize that due to a broader dissemination of Rothschild’s research output to students and interested people alike we have established a webpage for
Kurt W. Rothschild (http://www.kurt-rothschild.at/). On this website we provide a full account of Rothschild’s numerous scientific contributions. There you can choose your preferred topics out of 42 books, 183 refereed journal papers, 174 contributions to books and 146 book reviews. Moreover, we present photos, films and radio broadcasts about and with Rothschild. You will also find several of his talks at universities and public discussions. Additionally, there are numerous interviews with Kurt Rothschild on this website.

To give a brief résumé about Rothschild’s main ambitions we want to close this introduction with a final quote by him.

„Problem-orientation and relevance seemed to me right from the beginning as a desirable aim for the (individual and societal) research effort as a whole, though this label cannot and need not be characteristic for every single piece of research. Basic research, experiments with new ideas, trials in different directions without narrow restrictions from practical viewpoints are necessary, if our knowledge is to expand. But the ultimate subordination of the activities to relevant and humanistic ends should be – in my opinion – an essential aspect of professional ethics and should never be lost completely from sight.“ (Rothschild 1991, 8)

We hope that the contributions in this book will give justice to these demands.

Wilfried Altzinger – Alois Guger – Peter Mooslehner – Ewald Nowotny

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4 This large workload has been accomplished by David Ifkovits, Christof Brandtner, Matthias Nocker and Fritz Luther whose work we gratefully acknowledge.
References:


Ewald Nowotny*

Kurt Rothschild
Some Personal Remarks and Memories

* Governor of the Oesterreichische Nationalbank
It was never Kurt Rothschild’s aim to leave behind an economic school of thought as his legacy. Such academic imperialism, that is, the adherence to a structure of a "wise teacher" versus "admiring students," stood in stark contrast to his open-mindedness and his belief in non-hierarchical discourse. Thanks to his far-reaching scientific research and publications, his extensive and active involvement in education, and not least his impressive personality, he still turned out to have a lasting influence on a good many people. I gladly confess that I am one of them. Like many others, I was fascinated not only by the content of his scientific work, but also by his methodology of clear and extensive analysis and the extraordinary combination of clear social and personal convictions on the one hand and thoughtful tolerance on the other hand. In this way, Kurt Rothschild was a source of inspiration and a role model rather than a “teacher”– the epitome of a devoted scientist and caring individual who fully embraced his social responsibility. I am therefore very grateful that we had the opportunity to pay homage to this inspiring figure in an in-depth symposium, the results of which are published in this volume.

Several contributors, including myself, have provided a detailed picture of the different points in Kurt Rothschild's life in difficult times. In this brief introduction, I will therefore touch upon three aspects which, having worked with Kurt Rothschild, I view as typical of his thinking and which profoundly influenced my own development.

**The economy as a succession of disequilibria**

Back in 1969, when I was an assistant to Professor Rothschild at the University of Linz, young and enthusiastic about my field of research, I once made a presentation claiming that, thanks to modern economic theory, policymakers finally had an instrument to avoid deep crises and likened this to the successful eradication of epidemics. Having listened to my presentation, Rothschild congratulated me, with mild irony, on my sense of optimism. "A capitalist economy is always a succession of disequilibria, there will always be crises." This remark reflected his general skepticism about thinking in equilibrium models, an approach central to neo-classical theories, and, more specifically, about extending the Keynesian perspective toward Kalecki and Minsky (see also K.W. Rothschild, 1981). One of the most important lessons I learned from working with Kurt Rothschild is that "relevant" economic research must always be based on empirical and, in particular, economic-historical perspectives. I am sorry to say that it took the recent economic and financial crisis to move this approach back into the limelight (at least in the Anglo-Saxon world), a fact that is impressively documented by the perhaps most influential article on the financial crisis by Reinhardt and Rogoff (2009).
Rothschild between mainstream and critical economics

A broad-minded thinker like Rothschild is impossible to pigeonhole. I remember a lecture by the great Keynesian economist Joan Robinson at the University of Linz. Over dinner following the lecture, Robinson sternly lectured Kurt Rothschild for lacking loyalty to left-Keynesian principles, which he took in stride with friendly tolerance. Rothschild was indeed highly critical of the modern "orthodox" school of economic thought or "mainstream economics" as it is often dubbed. This does not mean that he was blind to new ideas, however. He did acknowledge progress in the development of theory and empirical economic research, advocating and showing tolerance for the different schools and branches of economics. Modern economics, by contrast, is fostering a kind of methodological monoculture; diversity no longer seems to be valued or desired. Kurt Rothschild was aware that there is such a thing as mainstream economics, even if it is not marked by absolute homogeneity. Mainstream economics may be characterized by methodological individualism and an associated microfoundation that uses the sum of the behaviors of agents maximizing utility. These are elements inherent in the two prevailing mainstream schools, the neo-classical school and the neo-Keynesian school.

So while Kurt Rothschild acknowledged the existence of a mainstream, he was not happy with the expression "heterodox." The mere fact that adjectives such as "orthodox" and "heterodox" were being applied to economics seemed odd to him. He once remarked that Google produced almost 50,000 hits for the query "heterodox economics," while "heterodox sociology" or "heterodox psychology" yielded only a handful of results. Rothschild did not consider it adequate that a paradigm or a theoretical construct should be given such a predominant position. As an advocate of tolerance, Rothschild felt that today's mainstream economics lacked the diversity the field needs to be able to explain reality in its actual complexity. Theoretical concepts are always limited in their scope; this is obviously also true of today's mainstream theories: " [...] I'm against the term 'heterodoxy', because you can't have a theory that explains everything. Economics is so complex that you need several different theories to explain different situations. You need pluralism, and Joan Robinson's 'box of tools'." [...] "You have many theories – neoclassical, Keynesian, institutionalist, and so on. They are all honourable theories, and all of them are important." (Rothschild and King, 2009). Rothschild also critically remarked that mainstream economics defied methodological pluralism; that it was a closed system working on the assumption that every opinion outside the system (the "rest") was in opposition. Rothschild, by contrast, was willing to accept parts of orthodox concepts and to use them as starting points for developing something new by adapting them.
The only thing he strictly rejected was declaring any approach absolute. For all these reasons it is difficult to tag Rothschild’s work (Marshallian? Keynesian? post-Keynesian?). Kurt Rothschild repeatedly criticized the illusory notion that theoretical approaches are truly exact, challenging their exaggerated claim of precision and universal validity. Gunther Tichy succinctly characterized Rothschild’s approach like this: "It is better to ask an important question than to answer an irrelevant one" and "It is better to get an answer to a question vaguely right than precisely wrong" (see also the foreword in Buchegger et al., 1990).

The merit principle and social balance

Kurt Rothschild was a fascinating but also challenging, even strict, university teacher, who also profoundly influenced his co-workers and assistants, not least through his impeccable ethical standards as a scientist. He viewed the promotion of the merit principle at the academic level in a broader social context. I remember discussing a specific case with him, in regard to which he explained that providing students with a clear merits-based framework and judging their performance solely on their academic achievements was particularly important for students from socially disadvantaged backgrounds. If schools and universities fail to implement clear performance-based standards, their graduates’ careers will be primarily determined by social associations and networks rather than academic achievement, which puts students from poorer families at a disadvantage. Thanks to Kurt Rothschild, promoting the merit principle and embracing social equality came to be the guiding philosophy of both teachers and students during the pioneer years of the economics program at the University of Linz. I did not fully realize this until later when I learned how different things can be during my work at a different institution.

It is not only the great scientist Kurt Rothschild that we – a large circle of students, friends and colleagues – gratefully remember today, but also a man that was sincere and kind – as was his insightful and perceptive wife Vally. I consider myself very fortunate for having known and learned from them.

References


John E. King*

Remembering Kurt Rothschild

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1 I am grateful to Wilfried Altzinger, Harry Bloch, Mike Howard and Heinz Kurz for comments on earlier drafts; the usual disclaimer applies.
Introduction

I should like to begin on a personal note. I only met Kurt twice (in 1993 and 2007), but I was introduced to his work very much earlier. As an undergraduate student of Philosophy, Politics and Economics in Oxford in the mid-1960s my economics tutor was the brilliant, wayward labour economist John Corina. He was a great admirer of Kurt’s, and made me read his marvellous *Theory of Wages* (Rothschild 1954). I learned a great deal from this book, which is both a textbook and a thought-provoking treatise. Corina also introduced me to what is probably Kurt’s best-known article, on the theory of oligopoly (Rothschild 1947). This made a great impression on me, as it had some years earlier on my friend and compatriot Geoff Harcourt, who describes it as the ‘most influential article I read as an undergraduate…It has influenced my thinking ever since’. Harcourt continues: ‘In my fourth-year honours dissertation I tried to introduce Rothschild’s oligopolists as the principal decision-makers in the economy into the model of *The General Theory*, to see if this affected the analysis of the systemic behaviour of capitalism. These themes run through much of my work ever since’ (Harcourt 2011, p. 120).

I shall return to this paper shortly, as it has some remarkably prescient comments on the methodology of economic theory and (in particular) on its inescapably multi-disciplinary nature. In the early stages of my own academic career I learned much from Kurt’s subsequent books and articles, not least from the magnificent edited volume on *Power in Economics* (Rothschild 1971), which posed many more important questions than it was able to answer – a defining characteristic, I think, of Kurt’s intellectual legacy as a whole. Then, in the early 1990s, when my research interests became focussed on the history of Post Keynesian macroeconomics, Kurt was an important source of information and, above all, of ideas. I visited him in his comfortable but modest apartment in the Döblinger Hauptstrasse in Vienna, on a brilliant, icy day in January 1993 and had a long conversation with him, exploring his views on economic theory, methodology and policy (King 1995). I found him to be friendly, unassuming and extremely helpful, but also to be a man of strong opinions and firm beliefs, many of which I shared. When I last saw him, in November 2007, he reminded me that he had moved since our previous meeting from the third floor to the first floor of the building, since his wife could no longer manage the stairs (the Habsburg-era lift seemed much more daunting to me). It was a privilege to have known him, and also a real pleasure. I am very grateful to Wilfried Altzinger for these photographs of Kurt, taken in 2009. If I look anything like this in 31 years time I shall be a very happy old man!
The end of the Rothschild story came soon after, with his death on 15 November 2010. It began, as it ended, in Vienna, where Kurt was born on 21 October 1914. He was not part of the Rothschild banking dynasty, but instead grew up in relatively humble circumstances in what he described as a basically non-political family (Rothschild 2006b, p. 37). He studied law and economics at the University of Vienna, where he learned much about marginal utility theory but very little about any other branch of economic analysis. Of his teacher, the brilliant, opportunistic Hans Mayer, he later recalled: ‘I don’t know if I ever heard him say the word “unemployment”’ (ibid., p. 39). Kurt’s early education in real-world economics came from outside academia, with his involvement in the socialist youth movement and his first contacts with the Austro-Marxism of Otto Bauer and Karl Renner. ‘Without reading “Das Kapital” (let alone understanding it!),’ he later wrote, ‘I learned to see the world and its economic aspects not just as a harmonious progress of mankind (which so obviously it was not) but as a dynamic process of interacting interests and conflicts, of power and exploitation’ (Rothschild 1999, p. 3).

As a Jewish socialist, Kurt was no longer safe in Austria after the Anschluss, and so in September 1938 he fled with his wife to Switzerland (his mother, who remained in Vienna, died in a concentration camp during the war). In Basle he taught himself macroeconomics, using (at the suggestion of Alec Cairncross) Joan Robinson’s *Introduction to the Theory of Employment* (Robinson 1937) as a point of entry to Keynes’s otherwise impenetrable *General Theory*. Kurt arrived in Glasgow in December 1938, worked very hard, and graduated in political economy and political philosophy in the summer of 1940. He was then interned as an enemy alien, spending several weeks in ‘a huge and desolate former textile mill in Lancashire’ (Rothschild 1991, p. 7). Here he attended lectures in economics by another
Austrian exile, Josef Steindl, who introduced him to the economics of Michał Kalecki (and also became a close friend).

On his release, Kurt returned to the University of Glasgow as assistant lecturer in economics and began to publish on Keynesian theory and on the economics of imperfect competition. His nine years in Scotland had a big influence on his outlook on the world. In sharp contrast with the polarised and confrontational politics of interwar Austria, he found ‘democratic attitudes which had grown in centuries of democratic institutions’, and ‘an openness towards other opinions and the readiness to cooperate with “other sides” when the situation seems opportune’. The essential decency of the Scots – to borrow George Orwell’s famous description of the English – ‘not only left its marks on my views on politics and political action but probably also contributed to [my] eclectic leanings in theoretical matters’ (Rothschild 1999, pp. 5-6; cf. Altzinger 2011a, p. 18).

When he returned to Austria in 1947 Kurt was unable to obtain a lecturing job. De-Nazification never went very far in Austria, and the universities remained in the hands of the same conservative bureaucracy that had controlled them during the Hitler years. When he heard that Steindl had been refused a PhD, ostensibly because his thesis had been written in English, he thought to himself, ‘They can get stuffed!’ (Rothschild and Graber 2009). Instead of a university job he found work (with the assistance of Friedrich von Hayek) as a research economist at the Austrian Institute for Business Cycle Research, today renamed the Austrian Institute of Economic Research (WIFO), and remained there for almost two decades. Here he specialised in labour economics and international trade, and continued to publish prolifically in both English and German. His work on the theory of wages and employment is discussed in some detail by Elisabeth Springler (2011a, 2011b) and by Herbert Walther (2011).

In 1966 Kurt was appointed foundation professor of economics at the University of Linz, where he taught until his retirement in 1985; he retained his links with WIFO until his death. Among his colleagues in Linz were two who are with us today: Kazimierz Laski, who had worked with Kalecki in Poland, and Ewald Nowotny, today head of the Austrian National Bank. Kurt was an inspiration to generations of heterodox economists, beginning with Corina’s and Harcourt’s generation, and then mine, through his many students from his days in Linz, right down to the young heterodox economists of the twenty-first century, some of whom I am delighted to see in the audience tonight. He published in every area of the discipline, from microeconomic theory through the history of economic thought and economic philosophy to questions of macroeconomic theory and policy. A lifelong social democrat and Keynesian, he was also a consistent advocate of pluralism in economics and a
perceptive and penetrating critic of neoliberalism: in Austria, within the European Union, and globally.

His unpretentious, eclectic but probing scepticism can be detected in all his economic writings, including the books on wages and on power in economics that I have already mentioned, and the sadly-neglected Economics and Ethics (1993a). Two volumes of his collected essays appeared in English in 1993 and 1995, the latter containing a reasonably complete list of his published work in English down to that date (Rothschild 1993b, 1995). The final Rothschild bibliography includes 42 books, 183 journal articles, 174 book chapters and 146 book reviews (Brandtner 2011). Kurt’s own reflections on his life and work can be found in my 1993 conversation with him (King 1995, chapter 15) and in a number of autobiographical essays and interviews (for example, Rothschild 1991, 1999, 2006a, 2006b). There are two German-language Festschrifte. The first, edited by Laski, Nowotny and Egon Matzner, honoured Kurt together with Josef Steindl, while the second was dedicated exclusively to Kurt (Laski, Matzner and Nowotny 1979; Matzner and Nowotny 1994). Shortly after his death two journals published symposia in his honour: Empirica (38:1, February 2011) in English, and Kurswechsel (2/2011) in German.

The Case for Pluralism

I want to explore five themes in Kurt’s work. They are distinct, but as we shall see they are also closely inter-linked. The first and most important is his commitment to pluralism in economics, which was exemplified by his own involvement in (at least) three heterodox traditions – institutionalism, (Post) Keynesianism and Marxism – together with a willingness to use mainstream economics when he thought that it was helpful. This final trait sometimes got him into trouble. He recalled how one summer, when Joan Robinson was teaching at the Arbeiterkammer in Vienna, they went for a walk and she asked him whether he had ever really used a neoclassical production function. When he answered in the affirmative, ‘she cried out as if I had committed a murder: “How could you?”’. Kurt was unapologetic: ‘Yes, I can, whenever it helps me to answer a specific question. I have nothing against it in principle’ (Rothschild 2006b, p. 39).

Kurt’s eclecticism and tolerance of competing perspectives on economics reflected his belief that:

‘…a plurality of paradigms in economics and in the social sciences in general is not only an obvious fact but also a necessary and desirable phenomenon in a very complex and continually changing subject where abstract general theories
(and abstract they have to be) can only cover a comparatively narrow and extremely simplified section of the totality of interdependent connections and developments.’ (Rothschild 1999, p. 5)

The subject matter of economics, he argued, is much more complex than that of physics (the great physicist Max Planck is said to have come to exactly the same conclusion). ‘So, it is not possible in economics to develop general theories as in the natural sciences. We need to study and to draw on many theories, including past ones’ (Rothschild 2006a, p. 11). Respect for the history of economic thought was therefore a continuing theme in Kurt’s work, and he insisted that introductory lectures in micro and macro ‘should be supplemented with the study of the history of economic theory’ (ibid., p. 13).

So too was respect for mainstream economic theory. ‘I think that neoclassical theories, like other theories, are an essential part of economic knowledge. One should know these things’ (ibid., p. 12). His objections to the mainstream centred on its growing intolerance. In my 2007 interview he described ‘the present situation in economics’ as ‘unlike that in any other science. Look up “Heterodox Economics” and “Dissenting Economics” on Google. You get 49,900 hits. If you ask for “Heterodox Sociology” or “Heterodox Psychology” you get five or six. You have a mainstream in other disciplines, too, but there isn’t this idea that there’s one special theory’ (Rothschild and King 2009, p. 151). This conclusion was recently confirmed in an excellent collective volume on the postwar history of the social sciences edited by two economists, Roger Backhouse and Philippe Fontaine (2010). The chapters on psychology, sociology, political science, social anthropology and human geography, each written by an authority on the discipline, reveal that economics is the only social science not to be diverse, pluralistic and tolerant of dissent. In similar vein the head of the Department of Politics and International Relations at Oxford University recently described his department in these terms: ‘We are self-avowedly pluralist in our teaching and research with enough of us to operate on the “zoo principle” – two of everything’ (Whitefield 2011, p. 4). I doubt whether the same could be said in 2014 of any economics department, anywhere in the world.

To a large extent, Kurt believed, the intolerance of academic economists was a matter of ideology, since this ‘one special theory’, at least in its more vulgar versions, ‘offers strong ideological support for people who want a free market. That means…the ruling capitalist interests’. He identified an additional factor: ‘once a mainstream has become established and people have been brought up in this tradition and have invested an enormous amount of mental energy in it, then they have “sunk costs” [here he used the English term] because they have so much invested in it’ (Rothschild 2006b, p. 41). The stubborn insistence by the great majority of mainstream macroeconomists on intellectual ‘business as usual’ in the wake of the
Global Financial Crisis has confirmed the continuing and malign importance of these sunk costs.

The mainstream insistence that only mathematical models and deductive reasoning counted as economic science, Kurt argued, was ‘nonsense. You have many theories – neoclassical, Keynesian, institutionalist, and so on. They are all honourable theories, and all of them are important’ (Rothschild and King 2009, p. 152). Kurt’s interest in institutionalism was closely connected to his long-term focus on the role of power in economics, which will be my second theme. His Keynesianism reflected his early study of the General Theory, his support for broadly Keynesian macroeconomic policy and – the point that I especially want to emphasise, because it dovetails with my own current research interests – his insistence on the relative autonomy of macroeconomics and his opposition to the mainstream dogma that macroeconomic theory must have RARE microfoundations, modelled on the supposed behaviour of a representative agent with rational expectations. This will be my third theme.

First, though, something more needs to be said about Kurt’s attitude towards Marxism. He was never a dogmatic Marxist, and he took very little interest in doctrinal issues like the labour theory of value or the falling rate of profit, but he did appreciate Marx’s broad approach to the study of capitalist society. The influence of the (similarly undogmatic) Austro-Marxists on the young Rothschild has already been mentioned, and I shall discuss his attitude towards the Marxian principle of historical materialism later on. He praised Marx for having ‘moved the distribution problem in an unequal society into the center of his analysis and with it the question of economic and political power’. But Marxian economics had proved unable to exert much influence over the course of mainstream economics, ‘partly because of weaknesses and shortcomings in its analytical apparatus in relation to several microeconomic processes which can be adequately treated in neoclassical and other models, and partly and predominantly for ideological reasons’ (Rothschild 2002, p. 437).

**Power in Economics**

This leads me directly into my second theme, Kurt’s analysis of the neglect of *power* in mainstream theory, which he believed to be related to its failure to see economics as a social science. Kurt always believed in the value of multidisciplinary work in economics. These concerns were apparent as early as 1947, when, in ‘Price Theory and Oligopoly’, he combined a critique of marginalism with serious reservations concerning the ability of game theory to deal with complex strategic problems and a refusal to stop at economics, narrowly defined. The big oligopolists, he noted, ‘have the power to change the market situation by their own political action…the gap that divides selling expenditure from political activities is
methodologically much smaller than the one that divides the former from production costs proper’ (Rothschild 1947, pp. 317-8). Both fascism and imperialism must be regarded as consequences of oligopoly, and ‘[t]he inclusion of these “non-economic” elements is essential for a full explanation of oligopoly behaviour and price’ (ibid., p. 319; original stress deleted).

Reading these remarkable passages again, almost two-thirds of a century after they were published, I was struck by the thought that here was a book waiting to be written. Then I realised that it had been, by Paul Baran and Paul Sweezy (1966). The influence of Kurt’s article on their analysis of Monopoly Capital is an intriguing, unsolved (and possibly now unsolvable) mystery. Possibly it went via his friend Josef Steindl, whose Maturity and Stagnation in American Capitalism (Steindl 1952) was well regarded by Baran and Sweezy; Sweezy arranged for it to be reissued by Monthly Review Press, with a substantial new introduction by Steindl (Steindl 1976).

Incidentally, this is not the only instance where Kurt identified a really significant problem but failed to follow it up, leaving others to write the influential papers and books that he had foreshadowed. Heinz Kurz will talk tomorrow about Kurt’s re-discovery of ‘efficiency wage theory’ many years before Joseph Stiglitz took the credit for it. I want to say something briefly about another important theoretical issue. In 1945 Kurt published a brief article on ‘Wages and Risk-Bearing’, questioning the mainstream economists’ assumption that only entrepreneurs have to cope with risk and uncertainty, which are (of course) an inescapable element of working-class life. It seems to have been almost half a century before he returned to this theme, at least in his English-language work, in a short paper written for the newly established heterodox journal Review of Political Economy (Rothschild 1945, 1990). As Gunther Tichy reminds us, Kurt believed that it was more important to ask important questions than to answer unimportant ones (Tichy 2011). As with power and efficiency wages, so with risk: Kurt was less successful than one might have hoped in answering them. There is a parallel with Baran and Sweezy: the importance of risk in the lives of all classes in capitalist society was the central theme of the sociologist Ulrich Beck’s best-selling book, Risk Society (Beck 1992), which has given rise to a considerable critical literature.

Kurt himself did return to the question of power from time to time. I have already mentioned the influential 1971 Power in Economics. Thirty years later, he criticised the way in which the discussion of power in mainstream economics was

‘… almost completely restricted to a narrowly defined economically hyphenated power, in particular monopoly power and bargaining power in goods and labor markets. This means it is restricted to specific and immediately market- and price-relevant power phenomena which can be easily endogenized
into a theory of competitive markets as deviations from perfect competition. But many power phenomena reaching beyond the immediate price formation processes are connected with the economic sphere. Power can be and is used for fighting for profitable positions in the market and for maintaining them, for influencing the framework which determines the working of market mechanisms, and power is also important as an aim of economic activity.’ (Rothschild 2002, p. 433)

This narrow focus, he believed, was the result of ‘deliberate strategies to remove power questions to a subordinate position for inner-theoretical reasons’ (ibid., p. 437). First, the growing mathematisation of economics had proved unsuitable for modelling power. Second, this increasing formalism had ‘led to a certain isolation of economics which in turn has promoted further mathematical inbreeding’, restricting its ability to deal not only with power but also with such other important issues as bounded rationality, fairness and solidarity. ‘Not only is there a reluctance to accept important insights from other social sciences, there exists also an economic arrogance expressed in “economic imperialism” which urges the other social sciences to copy the methods of neoclassical economics because it alone is declared to be “scientific”’ (ibid., p. 438).

There was, he noted, an element of reflexivity here: the ideological preference of powerful wealthy interests for a neoclassical theory that did not look too deeply into the sources and ramifications of their own power reinforced the neglect of power by mainstream theorists, not least by channelling research funds their way. ‘New Political Economists’ who treated politicians as self-centred utility maximisers should themselves be regarded as ‘utility-maximizers looking (exclusively?!) for a maximum of prestige and career opportunities…Extremely formulated one could say that societal power promotes the study of models of powerless societies’ (ibid., p. 440). Once again, the prescience of these observations has been repeatedly demonstrated by the origins, course and aftermath (thus far) of the Global Financial Crisis, in which the enormous political power of high finance has been obvious to everyone – with the exception of the great majority of mainstream macroeconomists (but see Johnson and Kwak 2010). Keynes’s biographer Robert Skidelsky recently devoted an entire blog to attacking ‘the cocksure drumbeat of the Money Power’ (Skidelsky 2011), a term that he will have encountered in the writings of Major Douglas, of Social Credit fame, and later in the oratory of the English fascist leader, Oswald Mosley. We have not heard the last of the Money Power.
**The Autonomy of Macroeconomics**

Kurt’s insistence on the multidisciplinary nature of economics leads me into my third theme, his rejection of the *microfoundations dogma* in mainstream macroeconomics and his insistence on the relative autonomy of macroeconomics (Walther 2011, pp. 35-8). Even if one accepted in principle the need for microfoundations – which he did not – there was no sound reason for restricting them to models that relied on the assumption of *homo economicus*. ‘It is interesting’, he observed, ‘that normally no demand is made for a further foundation of these assumptions by making use of newer results of psychology, sociology, and organization theory’, which cast serious doubt on ‘the primitive hypothesis of optimizing behavior’ (Rothschild 1988, p. 19).

But the principle itself was false. Micro- and macro-theories are ‘partial theories with restricted and different research programs’. They ‘overlap insofar as both of them deal with the global economy, but they are different as regards the problems and perspectives which each of them stresses’ (*ibid.*, p. 13). Thus:

‘One could also try to build bridges between the two approaches or even to construct some combinations in more compact super-theories. But there can be no justification for a hierarchical stipulation that (Keynesian or other) macro-theories require a microeconomic foundation to obtain full validity. One could just as well demand a macroeconomic foundation for microeconomics, when the latter finds it difficult to fit macroeconomic realities into its own framework.’ (*ibid.*, p. 14)

Insistence on the need for microfoundations ignored both the fallacy of composition and ‘the dependence of individual actions on the social environment’ (*ibid.*, p. 14). These two important principles are at the core of the book-length argument against *The Microfoundations Delusion* that I have been working on this autumn as a guest of Heinz Kurz and his colleagues at the University of Graz (King 2012).

Kurt himself was not convinced by the mainstream complaint that Keynesian macroeconomists tended to rely on *ad hoc* assumptions. In new areas of research, ‘where one meets many “white spots” and has to experiment with soft hypotheses’, *ad hocery* is ‘not a theoretical weakness but can be …a necessary element in the difficult stage of developing new theories or extending old ones’ (*ibid.*, p. 17). This was true in the natural sciences no less than in macroeconomics. Kurt might have noted here that anti-Keynesian macroeconomists are themselves quite shameless in their use of *ad hoc* assumptions when it suits them.
Representative agent models, to take an obvious example, make sense only on the assumption of ‘Gorman preferences’ (Acemoglu 2009, pp. 149-55), which are needed in order to render income effects insignificant. It is hard to imagine anything more ‘ad hoc’ than this, but we can try. The Dynamic Stochastic General Equilibrium models favoured by the mainstream impose a transversality (or ‘No Ponzi’) condition that eliminates (i) the possibility of default, and hence (ii) the fear of default (since these are agents with rational expectations, who know the correct model and therefore also know that there is no possibility of default), and hence (iii) the need for money, since if your promise to pay is ‘as good as gold’, it would be pointless for me to demand gold (or any other form of money) from you. The third *ad hoc* assumption is the unobtrusive postulate of ‘complete financial markets’ that is smuggled into Michael Woodford’s magisterial *Interest and Prices* (Woodford 2003, p. 64), which means that all possible future states of the world are known probabilistically and can be insured against: this eliminates uncertainty, and hence the need for money and finance. It does, however, pose a question that Plato might have recognized: not ‘who will guard the guardians?’, but ‘who will insure the insurance companies?’ (The AIG bailout in 2008 supplied the answer: the state, as insurer of last resort). As Yanis Varoufakis, Joseph Halevi and Nicholas Theocarakis (2011) have shown, in economic theory it is a simple matter to have either complexity or truth, but it is difficult (if not impossible) to have both.

Similar objections applied, Kurt maintained, to the mainstream insistence that microeconomics and macroeconomics must be theoretically consistent. He insisted that, on the contrary, ‘[p]erfect consistency between micro- and macro-theories is at present possibly unattainable in view of [our] limited knowledge, different research targets, aggregation problems, and the like’. In fact consistency between neoclassical microeconomics and Keynesian macroeconomic theory was probably ‘not even desirable’, because the former would rule out any serious discussion of the problems posed by uncertainty, time and money (ibid., p. 20). Be that as it may, a ‘comprehensive economic theory covering all important economic events seems hardly feasible’ (ibid., p. 13). Kurt would have welcomed the important new text that I cited above by Varoufakis, Halevi and Theocarakis (2011), which has at its core the ‘radical indeterminacy’ of capitalism and the impossibility of a logically consistent, mathematical economic theory of capitalist reality.

**The Modest Economist**

This introduces my fourth theme, which is Kurt’s own personal and intellectual *modesty*. This has quite rightly been stressed by Altzinger in his obituary and by Tichy in his discussion of Kurt’s seven principles of commonsense economics (Altzinger 2011a; Tichy 2011). Kurt
himself always emphasised that our ability to know, and to predict, is limited. Economics, he believed, was inevitably a soft science, which

‘…cannot be a ‘hard’ science comparable to mechanics or other highly developed branches of the natural sciences. The extreme complexity of the social world as well as its dynamic, the poor quality of empirical data, and the difficulties of experimenting make any attempt at reaching high levels of exactness futile, if one aims at more than just the construction of ‘logical’ models.’ (Rothschild 1991, p. 12, cited by Altzinger 2011a, p. 19)

This made him keen on analytical compromises, tolerant (as we have seen) of *ad hocery*, and also suspicious of any attempt to provide an over-arching ‘theory of everything’.

In addition to colouring his attitude towards mainstream economics, it was also reflected in his attitude to the Marxian principle of historical materialism (HM). As he said, in an email criticising my own work:

‘…one can get the impression – in spite of your modifying remarks – that HM has unique consequences and tends towards the establishment of the ‘best’ conditions for the development of the opportunities provided by the productive forces. I always regarded HM above all as the decisive antidote to the views that the big historical events and changes are due to the influence of eminent individuals, of new ideas, of cultural clashes etc. I viewed HM as providing a (perhaps small) corridor within which a limited number of viable (but not necessarily optimal) economic structures can exist. Within this corridor other factors can play a role so that differences can exist and persist. There can be several capitalisms and/or different socialisms (or something else). There will normally be a tendency towards similarities because science and technology is universal and because there is a tendency to copy hegemonic and successful cases. But HM cannot explain all the remaining differences, which may also be interesting (‘Vive la différence!’). All this is also in your book, but it is somehow suppressed in the beginning.’ (Personal communication, 4 September 2008)

This, I think, is fair criticism of the book that I wrote with Mike Howard attempting to provide a historical materialist explanation of the rise of neoliberalism (Howard and King 2008). We probably did exaggerate the determining power of the forces of production. On reflection, I think that Kurt’s metaphor of the corridor is particularly apt: broad historical
tendencies are perhaps predictable in Marxian terms, but particular individual, group and even national idiosyncrasies are probably not.

**Politics and Economic Policy**

This leads me to my fifth and final theme in his work, which is *politics and economic policy*. Kurt had a lifelong commitment to social democracy, which led him to ponder the policy implications of Keynesian macroeconomic theory and, in the final decades of his life, to mount a systematic critique of neoliberalism. He was also deeply interested in the relationship between economics and ethics, a vast subject area that I shall be teaching in for the very first time in the second half of 2012; I expect to make considerable use of his book (Rothschild 1993a). On this question, too, he was critical of the mainstream position, as defended by the Melbourne economist Yew-Kwang Ng:

‘The choice of subjective welfarism as a standard has, of course, a long and useful tradition in economic theory as a framework and as an axiom for decision-making. But there is no reason to regard it as the only possible basis for social choice and ethical valuation. Quite apart from social interlinkages via external effects, prisoners’ dilemma situations etc, which may necessitate collective action there is no reason why ethical considerations should not introduce general values, interpersonal comparisons etc. which go beyond individual welfarism.’ (Rothschild 1989, p. 258)

I remember once attending a seminar presentation by Ng and asking him at the end whether he felt any sympathy for John Stuart Mill’s distinction between higher and lower pleasures. He replied dismissively, in Benthamite vein, that he saw no reason to distinguish between poetry and pushpin, but I was not sure that I believed him. Kurt would certainly have disagreed, and he was also critical, at an even more fundamental level, of the utilitarian emphasis on subjective welfare. ‘While preferences of the individual are given highest weight’, he objected, ‘there is one preference which they are not permitted to have: a preference for non-market transactions’. Economists could legitimately offer advice on ‘economic efficiency’, he agreed. ‘But are they supposed to talk people out of other modes of decision and action?’ (*ibid.*, p. 259).

Kurt’s own approach to these questions was always based on ‘the hope that with a better understanding of the economic mechanisms a contribution to a more satisfactory economic and social society could be achieved’ (Rothschild 1999, p. 4). Growing up in ‘Red Vienna’, he learned early in life that the world was characterised not by harmonious progress
but (in words that I have already quoted) by ‘a dynamic process of interacting interests and conflicts, of power and exploitation’. At the same time, the achievements of the Austrian social democrats in the 1920s

‘…remained as a permanent reminder that activism and intervention are possible and useful when conditions are regarded as unjust or undesirable, particularly in regard to basic human needs and extreme inequalities. This was a perspective which I could to some extent detect again in the post-war years. It inspired the idea of the welfare state, but is being lost in the present neoliberal climate.’ (ibid., p. 3)

In his last English-language article Kurt documented his concerns, using simple descriptive statistics on growth rates, inflation and unemployment to demonstrate that the performance of the OECD economies had not improved significantly in the era of neoliberalism, as advocates of free market capitalism often claimed (Rothschild 2009). This conclusion has, of course, again been reinforced by the ‘Great Recession’ that began in 2008.

Concluding Remarks

As the photographs confirm, Kurt remained fit and active almost until the end, and he continued to write and argue on theoretical and policy issues. His last book, Wie Wirtschaft die Welt bewegt: die grossen ökonomischen Modelle auf dem Prüfstand (How Economics
*Makes the World Go Round: The Great Economic Models Put to the Test*, co-authored with the journalist Hans Bürger, was published in the year before his death (Bürger and Rothschild 2009). His final interview in English appeared in *Review of Political Economy* in January 2009 (King and Rothschild 2009). In the interview, which took place in November 2007, just before the onset of the Global Financial Crisis, Kurt declared himself to be unimpressed by the long period of prosperity that the world had enjoyed since 1992: ‘I would say that it’s not really a boom, but rather an absence of recessions. Unemployment has been consistently higher than it was in the 1960s and 1970s. So it’s wrong to describe the last 15 years as a boom’. He was equally unconvinced by talk of a ‘Great Moderation’: ‘The so-called “big success” of the European Union consisted in getting rid of inflation. But Thatcher had already done that in the United Kingdom. If you only have one target, you can always meet it’ (Rothschild and King 2009, p. 145).

Kurt’s 95th birthday was marked by two events. The first was a symposium arranged by the economic policy think tank *Arbeitsgemeinschaft für wissenschaftliche Wirtschaftspolitik* (Foundation for Scientific Economic Policy, WIWIPOL), and the second was an international conference on ‘The Aftermath of the Financial Crisis’, hosted jointly by the Austrian National Bank and by WIFO (the proceedings of the latter were published in the journal *Empirica*, as I have already noted); Kurt participated actively in both events. Austrian public radio also broadcast an hour-long documentary on his life and work. At the same time the Vienna daily newspaper *Der Standard* published the text of a lengthy conversation that he had with the journalist Renate Graber in which he talked about his life and career, and also about the Global Financial Crisis and its consequences. While he expressed strong views on the need for tighter regulation of financial markets Kurt was, as ever, modest and undogmatic in his prognosis.

‘Are you optimistic or pessimistic for the future?’, Graber asked him. ‘Every scientist’, he replied, ‘assuming that economists are scientists, says that you have to be sceptical. Normally we construct scenarios that are more or less probable. But right now we are in an entirely new situation, for which we have only inadequate economic theories and models’. These doubts extended well beyond economics. Kurt concluded the interview by reflecting ruefully on the dismal state of political discourse in contemporary Austria: ‘You know, when I was young there was an awful reactionary upper class and a working class, part of which wanted a different world. Today it’s almost the other way round. We have a very critical intellectual upper class, but due to changed economic circumstances there is no broad lower class that wants a different, a better world’ (Rothschild and Graber 2009; cf. Rothschild and King 2009, pp. 147-8).
Ten years earlier he had reflected on the life experience of someone born in pre-1914 Bratislava, who had been a citizen of Austro-Hungary, Czechoslovakia, Germany, Czechoslovakia again, and finally Slovakia, without ever leaving his native city. Much the same could be said of his own life, Kurt concluded, and in particular of his relationship with Keynesian theory and policy. ‘I could be a conformist with ruling tendencies then and have become a dissenter now. But I have never left Bratislava’ (Rothschild 1999, p. 7).

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Unemployment, Distribution of Income and Asset Price

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I am among a few in this conference who was neither a student nor a colleague of Professor Kurt Rothschild; at least not directly. And yet, indirectly I was both!

My first introduction to Rothschild was as an undergraduate student, when in Calcutta I read his well known article, ‘Price theory and oligopoly’ published originally in the Economic Journal in 1947. That Journal was not available in our undergraduate college library. I happened to read it rather accidentally in a volume of ‘Readings in Price Theory’. That article was an exhaustive characterization of various oligopolistic situations without the mathematics of game theory and industrial organization, now a fashionable branch of research. It showed how price setting under oligopoly could take place in different ways, and there were several almost equally plausible models of oligopoly. The open-ended nature of the price setting problem under oligopoly made an impression on me as a beginner. Everything we had read so far in undergraduate textbooks of microeconomics was logically determinate and predictable. From Rothschild I learnt for the first time the important lesson as to how economic problems could become indeterminate. I do not know whether it was the intended message of the article, but it seemed to me that the core of this problem of indeterminacy was the variety of ways in which economic power can manifest itself in different contexts, somewhat like a fluid which takes the form of the container.

Rothschild was fascinated with the problem of economic power throughout his professional life as any economist really should be. (Philosopher Bertrand Russell said somewhere he found the study of economics singularly uninteresting because it did not deal with power). Rothschild considered from different angles, both through his own writing and that of others, various aspects of power, its economic, ethical and policy dimensions (e.g. Rothschild ed, 1971, 1993).

In his writings Rothschild emphasized less the other source of indeterminacy or one might use better the expression “unknowability” inherent in economics which is radical uncertainty about the future. Years later, I began to appreciate its importance in connection with Keynes’ monetary theory as a student and researcher in Cambridge, England. It is typical of many economists to pretend that neither economic power nor uncertainty is a serious matter; the serious matter is only to get along with econometrics and model building! Fortunately Kurt Rothschild was not one of them.

On a generous interpretation, economics like geology or evolutionary biology is a body of knowledge which does not predict. We cannot predict exactly when a volcano would erupt, an earthquake would occur or the extinction of a species would happen (Although Darwin made some startlingly accurate predictions about the characteristics of species in Madagascar island
without ever having visited it). However, somewhat like these subjects, economics can explain many of the necessary conditions needed for an event to occur. Nevertheless, this is far from prediction, because the conditions must be sufficient in history or in nature for an event actually to occur. For example, it was not difficult for many particularly in the Keynesian tradition to see that the U.S was heading for a crisis driven by asset price bubble and rising debt. However, it was not possible to predict when it would occur. Indeed, the quip that military generals are better at analyzing the past battle than in fighting the present one, fits economists even better.

If Rothschild was my early teacher about the role of economic power, he also became in a sense my colleague. I joined the Economics Faculty in Linz for a brief period in 1986 at the invitation of Professor Laski, and learnt that I had the job that had fallen vacant due to the retirement of Professor Rothschild. We met professionally for the first time in 1986 and our professional contacts matured gradually into friendship over the years when I visited Vienna. Interestingly, we discussed politics frequently, the influence of political power and ideology on economic policies at times and rather rarely economic theory. Some typical topics of conversation as I recall now were, the rise of the Right in Austrian politics, social democratic ideology and European Union, and why the majority in India remain so desperately poor after so many years of political independence despite a democratic form of government.

Our interests in economic theory overlapped to a considerable extent due to the similarity in our political outlook. And yet, although we were often interested in a similar range of issues, our analytical approach often differed. Rothschild believed in being comprehensive. He was intellectually generous to different points of view in his erudite and many sided explanations of problems like unemployment and distribution of income. I am afraid I was intellectually less tolerant, and believed that understanding such problems mean a few core propositions and without them no meaningful understanding is possible. At times we argued about whether one should teach various approaches or discriminate and present in greater detail what one considers the more valid approach. I recall Rothschild telling me that it might be better to leave the task of discriminating to the students after they understand different approaches. It seems to me it made his teaching academically rich but at times less convincing because it was more of an academic exercise, less connected with his personal political views.

In his theoretical framework Rothschild remained closest to a left wing Keynesian, who liberally used concepts especially from Marx, Weber and Marshal to enrich his own analysis. His abiding interest in the role of economic power inclined him to examine class and personal distribution of income from various micro and macro economic (and ethical) angles. He
considered the problem of wage determination along with income and employment determination (Rothschild, 1965).

One of the novel aspects of Keynesianism was to claim that, the demand for labour and employment are determined by aggregate demand in the commodity market, and the state of the labour market and the wage rate have a relatively less important role to play. Contrary to conventional neo-classical teaching (Professor Pigou as Keynes’ special target), high or low wage are the outcomes, not the causes of unemployment. It reminds me of a saying of the 1960s among the poor Afro American families in the Deep South of the United States: “Whether a big steak (high wage) will be cooked for dinner (available) in the kitchen (labour market) is not decided in the kitchen”.

As is well known, Keynes himself tried to reconcile the role of the labour market and profit maximization with his theory of employment determination in the product market by bringing in money illusion on the part of the workers. This made real wage rate an endogenously determined variable. The first round of Monetarist attack on Keynes was led by Friedman (1968) precisely on this point. He claimed that persistent money illusion on the part of the workers is an untenable assumption so that the Phillips curve becomes vertical in the long run. Rothschild had little sympathy for this line of reasoning and, had considered money illusion in influencing the level of aggregate demand along the line the real balance or wealth effect of Pigou and Patinkin (Rothschild 1957; 1965).

The debate on the role of the labour market in employment determination has returned in a different way through some recent textbook versions as the aggregate AD-AS (aggregate demand and supply) analysis. The idea is to represent like in any other market, the problem of wage and income determination simultaneously through the intersection of demand and supply curves. In a collaborative work with Professors Laski and Riese (1999a, 1999b) we showed (among other authors) why this construction used in many textbooks is analytically flawed. It cannot define any adjustment process out of equilibrium to carry the main message of the market place as an equilibrating mechanism. The comforting thought that the market mechanism operates in the aggregate to clear the labour market and determine income and wage simultaneously is unacceptable economic reasoning (unless like some extremists in rational expectation theory one believes that markets are never out of equilibrium). The basic reason is simple. The firms as agents of production can follow either the rule of maximizing profit and determine employment with real wage rate given as a parameter (the typical neo-classical version) or produce a level of output to meet market demand at given prices and money wages (the Keynesian version). However, as agents of production they cannot follow both the rules simultaneously once out of the equilibrium state (i.e. where AD-AS intersect).
Because only at that point by assumption both profit maximization and commodity market clearing are satisfied. The aggregate AD-AS analysis was confused with the microeconomic demand supply analysis because, in the latter analysis demanders as buyers are postulated to be different from suppliers as sellers. However in aggregate AD-AS analysis they are the same agent, namely the firm, and the micro framework that the two agents react differently to the price signal is no longer applicable, nor is the condition of separation of income of buyers and of sellers satisfied. Variations in the wage rate received by households as sellers of labour service affect aggregate demand of consumers through purchasing power and investment demand of firms (through capacity utilization and profitability). By linking price variation with income variation this creates a powerful income effect to vitiate the stability property of the price mechanism, as has long been recognized in multi-market General Equilibrium Theory.

Malinvaud tried to rescue this type of analysis in the multi-market context by separating Classical from Keynesian unemployment (Malinvaud 1977). He tried to establish that Classical unemployment is caused by too high a real wage rate which restricts employment and production below the level of aggregate demand. Thus excess demand in the commodity market coexists with unemployment. On the other hand, at low real wage rate, aggregate demand is too low in relation to the profit maximizing level of output and employment, aggregate demand becomes the binding constraint resulting in excess supply in the commodity but excess demand in the labour market to attribute unemployment a Keynesian character. The separation between Classical and Keynesian unemployment raises several problems pointed out almost immediately by Kahn (1978) and Rothschild (1978). A gross logical flaw, as I argued (Bhaduri, 1983) arises from not taking into account fully the same income effect. Profit maximization as the neo-classical principle guiding firms would affect investment due to variations in the level of real wage, not merely by consumption of households. Consequently effective demand might vary in such a way as to result in multiple equilibria. It would no longer be possible to link unambiguously Classical employment with high and Keynesian unemployment with low wage. Indeed, Classical unemployment may occur both at relatively high and at low wage, with Keynesian unemployment ruling in the intermediate range. As a result the classification becomes useless.

In the Keynesian scheme the class distribution of income impacts on aggregate demand and generate an income effect with different implication. Variation in redistribution of income in favour of profit would reduce aggregate consumption expenditure and raise saving because less is consumed out of profit than out of wage income. It would also impact simultaneously on investment through the accelerator like effect of capacity utilization as well, while higher profitability (profit margin) would stimulate investment. In real life they would operate with
different time lags, consumption is likely to react faster than investment. This allows for a
different type of generalization of the Keynesian theory. In a closed economy redistribution of
income between profits and wages affects aggregate demand through two different channels.
Depending on the relative magnitudes of the stimulating effect of a higher profit share on
investment and its depressing effect on lower consumption expenditure due to redistribution
in favour of profit income two alternative possibilities emerge for demand-led expansion. The
case dominated by greater consumption expenditure due to higher real wages and lower profit
share is called consumption or wage-led, whereas the case dominated by higher investment
expenditure due to higher profit share and lower real wages is termed as profit-led. In a profit-
led regime, the stimulating effect of profit share on investment dominates, but in a wage led
regime the opposite holds. However the emergence of these two regimes requires the
convergence of the one-variable income adjustment through the multiplier process to be stable
which in turn requires saving to be more responsive than investment to changes in income
provided we treat income distribution or real wage as an exogenous variable (Bhaduri and

This raises problems. In contrast to neo-classical theory, the real wage rate is not an
exogenous but an endogenous variable which is the outcome of employment and income
determination. It is influenced by money wage price level interdependence, money illusion as
well as money wage relativities of different industries. Keynes denied the real wage rate a
causal role in determining income. Hence it seems problematic to treat the real wage rate or
the distribution of income as an exogenous variable to which both consumption and
investment respond in the Keynesian scheme to distinguish between profit and wage led
regimes. On the other hand, if the real wage rate is treated as endogenous variable governed
by the interdependence between the price level and the money wage rate, the profit share
should be treated as an endogenous variable.

A solution lies in Kalecki’s formulation. As an independent discoverer of the principle of
effective demand (1933/1971) he had postulated cost-determined mark-up pricing that
resolves the issue. In the simplest case of a closed economy without imported raw materials
and complications of natural resource pricing, the general price level of manufactured goods
is postulated as determined by a constant percentage mark up on unit wage cost. So long as
the proportional mark up is constant price and money wage move proportionately. With unit
cost nearly insensitive to the level of production due to presence of excess capacity within the
relevant range, it conforms to approximate profit maximization (Bhaduri and Falkinger, 1990)
and ‘satisfying behaviour’ under incomplete information (Simon, 1979). This view of price
setting has also found considerable empirical support.
Under mark up pricing a simple positive relation holds between mark up and aggregate profit share. And, by linking profit share to the degree of monopoly one could bring in market power to explain profit share. However it does not take our analysis much farther, because one needs to explain the determinants of market power or the degree of monopoly through various factors like elasticity of demand, market concentration, asymmetry in information, entry and exit from market under imperfect capital market etc. Some of these issues were explored while examining economic power by Rothschild both in the context of wage determination in the labour market and price determination in the product market.

An alternative explanation was provided by Keynes (1930) and reformulated by Kaldor (1956) to combine the multiplier analysis with money illusion on the part of the workers to suggest that for a given level of output (full employment) an excess of investment over saving would be met by savings generated by redistribution of income in favour of profits due to the price level increasing more than the money wage rate. We therefore have the multiplier mechanism put to work in two ways to equate investment with saving. Below full employment, higher investment results in a higher level of income which raises saving as a proportion of income in the Kahn-Keynes multiplier. At full employment with given real income, it raises the level of saving from higher profit share through redistribution of income.

Separating the working of the multiplier below and above full employment in this way has several problematic aspects. First, when full employment is introduced as a postulate, it leaves open the question of what maintains full employment. Second, the assumption of money illusion on the part of the workers implies lower real wage despite full employment. Finally, there is at best an ill defined full employment zone. The tight separation between an adjustment process working exclusively through capacity utilization below full employment level and, only through price-money wage interaction at full employment is overdrawn.

However, it is possible to rescue the argument about the dual role of the multiplier in determining output on the one hand and class distribution of income on the other in its proper dynamic context without either the postulate of full employment or money illusion (Bhaduri, 2007). A higher level of demand raises capacity utilization and saving. Through disparate movement of price and money wage, it may either increase (forced saving by workers) or decrease (profit squeeze on capitalists) the level of saving. Both these processes distributional change and income level adjustment operate simultaneously through the same imbalance between investment and saving, but they operate at different speeds. So long as the speed with which saving rising in the process exceeds the speed at which saving falls due to say profit squeeze, the income generation process set in motion by the multiplier process would converge. Thus neither the assumption of forced saving by workers nor that of full
employment is necessary. It is even possible to consider more complex (non-linear) dynamics due to varying speeds of adjustment. It is plausible to argue that adjustment of capacity utilization slows down but price and wage movement respond faster as full employment is approached. However, formal analysis would require greater specification about the precise nature of the non-linearities involved.

Keynes’ theory was set in the context of his time. The economy was assumed to be closed like in our discussion so far, and he assumed considerable control by the central bank over national money supply. Some of these assumptions were deliberate to emphasize the importance of national economic policy. With globalization and financialization, the context has undoubtedly changed. And yet, like other powerful theories, its basic message laid out in the principle of effective demand remains valid. That basic message that exogenous increase in expenditure, sets up positive adjustments in income has been given a conservative twist in recent decades. Income inequality has been allowed to increase in almost all OECD countries, most spectacularly in the United States. Starting with tax cut mostly for top income brackets which was justified as a stimulant to the incentive to invest, the rising income of the very rich contributed not so much to real investment but to demand for esoteric financial assets with high returns from capital gains. It was met through securitization and reassembling collateralized debt obligations (CDO) of loans and housing mortgages. Liberalized markets imposed little supervision and, the credit rating agencies went along, but the vast system of shadow banking that developed along with it had no lender of last resorts, only mutual private insurance arrangements (derivates and swaps).

Rising capital gains drove a bubble economy which can be characterized briefly from a Keynesian angle. It takes two to tango. Increasing the value of assets and capital gains (G) create a positive wealth effect for borrowers who borrow against the rising value of their wealth to increase their consumption (C) and purchase of financial assets. Banks and other financial firms as lenders experience improved balance sheets and, become more eager to lend. As a result capital gains stimulate consumption expenditure through borrowing while rising repayment obligations on the accumulating debt might counter this slowly over time (Bhaduri, Laski, and Riese, 2006). A simple consumption function captures it in the form:

\[
C = C(Y, G, D), \quad C_Y > 0, \quad C_G > 0, \quad \text{and} \quad C_D < 0.
\]

The signs of the relevant partial derivatives show consumption C depend positively on income Y and capital gains G, but negatively on the inherited stock of debt D.
The effect of an asset market boom on real investment is more complex. In so far as expected capital gains lure investment away from the real to the financial sector, it can be captured by Keynes’ ‘two price theory’ comparing acquisition price (P) of an asset in the stock market with its replacement price (R). For our present purpose, we may define acquisition as purchase of existing assets in the secondary market which merely transfers ownership without creating new assets. In this sense all second hand transactions are not real investment (Scitovsky, 1994). This idea of comparing acquisition with the “construction cost” of real investment was reformulated in Tobin’s (1969) q-theory in a competitive market while Minsky (1975) treated it more realistically by incorporating expectations about capital gains.

Under highly simplified static expectation postulating actual capital gains (G) is extrapolated as expected capital gains (G⁺), we restate a revised q-theory as,

\[ q = [(P-G^+)/R] = [(P-G)/R], \text{assuming } G^+ = G \]

In equation (2), the acquired asset is assumed to be readily resalable in the stock market with the expected level of capital gain reducing the acquisition price P for the investor. As a result capital gains increase the attractiveness of acquisition in relation to real investment, and tend to divert funds from real to acquisition investment. Lending institutions with their improved balance sheets under capital gains are also more willing to lend. Consequently, financial conditions are more favourable for all types of investment and the total volume of investment is higher, but its composition moves against real investment under capital gains. To keep this exposition simple we assume given interest rate and postulate a demand function for real investment (I) as,

\[ I = I(Y, G, D), \text{IY} > 0, \text{IG} < 0, \text{ID} < 0 \]

In equation (3) real investment is influenced positively by income (or capacity utilization) through the acceleration like effect, negatively by capital gains in line with the ‘two price theory of investment’ postulated in (2), while the repayment obligations on the stock of debt depress both consumption and investment. Undoubtedly this investment demand equation is oversimplified. It leaves out in particular the fact that both real and financial investments are encouraged by easier availability of credit which in turn is stimulated by capital gains. Therefore equation (3) captures the composition effect on total investment, and assumes for simplicity it is sufficiently strong to make real investment respond negatively to capital gains.
In general expected capital gains attract capital inflow from abroad in various domestic assets and create a capital account surplus in the balance of payments. If the overall balance of payments is kept constantly balanced, this would have its counterpart in current account deficit. While this is merely an accounting convention, the economic mechanism through which capital gains (G) lead to this compensating current account deficit can take several routes classified broadly as price and income effect. Thus the inflow on the capital account might create a ‘price effect’ through appreciation of the exchange rate which in turn stimulates imports and depresses exports to affect adversely current account balance. The expansion of income (Y) usually raises demand for imports, and this income effect reduces current account balance, whereas a higher level of accumulated debt (D) depresses directly the current account balance through negative factor income flows. These effects on the current account (B) are summarized as,

\[ B = B(G, Y, D), B_G < 0, B_Y < 0, B_D < 0. \]

In a typical Keynesian short period we consider first the equilibrium of only the flow variables, taking the stock of debt (D) as given. Saving (S) investment equality determines income (Y) in a laissez faire open economy in this short period. From (2), (3) and (4),


With the inherited stock of debt D treated as a given parameter, total differentiation and rearrangement of terms in (5) yields.

\[ \frac{dY}{dG} = \frac{[I_G + B_G - S_G]}{[S_Y - I_Y - B_Y]} = \frac{[\text{+} + (\cdot) - (\cdot)]}{[\text{+} - (\cdot) - (\cdot)]} \]

The usual condition for the convergence of the Keynesian income adjustment process in the single variable closed economy namely, \( S_Y > I_Y \) is sufficient for rendering the denominator of (6) positive (since \( B_Y < 0 \)). Therefore the sign of the numerator determines the sign of the slope of \( Y \) with respect to \( G \). From (6), higher capital gains have the effect of expanding aggregate demand through depressing savings and stimulating consumption, i.e. \( S_G < 0 \). Since a higher level of higher capital gains reduces the relative attractiveness of real compared to financial investment (\( I_G < 0 \)) while increasing deficit on current account by attracting funds on capital account (\( B_G < 0 \)), the numerator in (6) will be positive if the depressive effects of real investment and current account balance outweigh the stimulating effect of capital gains through lower saving on aggregate demand. In that case aggregate demand and income expand with higher capital gains yielding, \( \frac{dY}{dG} > 0 \). In the opposite case, the numerator in
(6) is negative and \((dY/dG) < 0\). Diagram 1 explains the emergence of two regimes through the locus of investment saving equality or the IS curve determining income, at different levels of capital gains.

Figure 1: Emergence of Two Regimes through Saving Investment Interaction

The saving curve shifts downwards, say from \(S_0\) to \(S_1\) (or \(S_2\)) as higher capital gains stimulates consumption to depress saving. The real investment plus current account curve \((I_0 + B_0)\) also shifts downwards to \((I_1 + B_1)\) as a result of the negative impact of higher capital gains. The intersection point between the two shifting curves trace out a saving investment equilibrium or IS locus in an open economy with the level of capital gains operating as a shift parameter. Depending on the extent of shifts in the two curves, the new equilibrium can lie either to the right (expansion) or left (contraction) of income at higher capital gains. As shown by the numerator of equation (6), the sign of slope of the IS curve is determined by the relative strength of the shift in the investment and saving curve caused by variations in the level of capital gains.
It is natural to characterize the positive relation between income and capital gains, \((dY/dG) > 0\) as a consumption-led regime where the stimulating effect of capital gains on consumption outweighs its depressing effect on real investment and current account. However, in the opposite case the depressive effect of capital gains on real investment and current account dominates making the economy investment led with \((dY/dG) < 0\).

An interesting implication of this analysis follows immediately. The relation between the health of the real economy and that of the stock market is generally ambiguous until the nature of the regime is identified. In the consumption led regime, asset price rises (falls) with rising (failing) income and economic activity. However, the situation is reversed in the investment led regime. Asset price rises (falls) while income falls (rises) in the investment led regime. In a more comprehensive analysis it should be possible to include dynamic feedbacks like rising asset prices diverting further investment away from the real to the financial sector. It is also possible to show in this model how the resulting weakening of credit standards (e.g. sub-prime lending) by raising the default on loans creates pressure for ‘funding’ as the margin contracts in the financial markets to create a dramatic financial collapse leading to deep and lasting recession in the real economy. However, such extensions of the Keynesian analysis require introducing endogenous money and the internal liquidity requirement of the financial sector to meet default (Bhaduri 2011). These extensions lie beyond the scope of the present paper.

**References and Footnotes**


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1 In order of appearance in the text


Discussant: Markus Marterbauer*

Comment on the Paper by Amit Bhaduri

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The influential paper by Bhaduri and Marglin from 1990 discussed the relation between class distribution of income and economic growth in a neo-kaleckian way. It showed that there are two possible growth regimes: a profit-led regime in which higher profits lead to stronger investment and GDP, and a wage-led regime in which higher wages increase consumption and output.

The Bhaduri-Marglin model has been the starting point of a series of papers in Austria. Kurt Rothschild, interestingly, discussed aspects of this model as far back as 1985 in a paper published in Wirtschaftspolitische Blätter, titled „Lohnpolitik und Beschäftigung. Einige theoretische Bemerkungen.“

In recent years Engelbert Stockhammer, Özlem Onaran, Stefan Ederer and others discussed the relationship between the functional distribution of income and economic development for European economies. The most important outcome of these papers was the following conclusion: high openness of an economy, as for instance typical for Austria, increases the tendencies for a profit-led regime.

In the Euro area in the last decades two models of economic development have been emerging:

1. A first group of countries has been characterised by the emergence of speculative bubbles in liberalized financial and real estate markets: This has been the case in Spain or Ireland, but also in the UK. The bubbles have been accompanied by an enormous increase in private debt levels. This pushed internal demand, increased nominal unit labour costs as well as unit profit costs. And it has been leading to rising deficits in the current account balance.

2. In a second group of countries unit labour costs have been declining in real terms. Internal demand has been exceptionally weak. Exports on the other hand have been rising and the surplus in the current account increased; this has been typical for Germany, the Netherlands, the Scandinavian countries and Austria. In Germany exports in real terms have nearly doubled in the last decade, while private consumption has been stagnant.

Both models turned out to be not sustainable:

- In the group of deficit countries, after the burst of the bubble a deep recession followed. This was accompanied by a tremendous increase in budget deficits and unemployment rates.
The countries with current account surpluses contributed considerably to the imbalances within the Euro area. The rising export surplus has been invested in foreign financial markets. This strategy therefore played a major part in the emergence of the financial crisis.

Interestingly in both groups of economies wage shares have been falling considerably. This points towards a prisoner’s dilemma situation within the internal market of the EU. The European economy is more or less closed. Exports of goods and services account for less than 20 percent of GDP. 80 percent of goods and services produced within the European Union are also consumed within the internal market. The member countries, however, are exposed to a high and increasing openness of their economies within the internal market. Even Germany, the largest economy, exports nearly half of the goods and services it produces. The individual countries therefore rely on wage restraint, hoping for a profit-led regime of growth. However, the EU as a whole is characterised by a wage-led regime due to its closed character. For the Union as a whole, the profit-led strategy of the individual member countries therefore leads to a decline in welfare and employment.

In recent papers, Prof. Bhaduri has been adapting the Bhaduri/Marglin model to the context of globalization and financialisation, the world of volatile asset prices and financial bubbles. In this world the increase in profit income and capital gains does increase investment as well. But here higher profits lead only temporarily to higher investment in real assets, but primarily to investment in financial assets. So the bubble is fueled even further. The profit-led type of economic development on which most of the European economies rely is part of the bubble economy.

We are now in a situation were the bubble has burst, with tremendously rising unemployment and a long lasting recession. The number of unemployed has been increasing by 9 million since early 2008. In 19 out of 28 member countries of the European Union the youth unemployment rate is higher than 20 percent. In Greece and Spain it is even exceeding the level of 50 percent. And the trend of unemployment is still not pointing downwards.

It is striking that the problem of unemployment is not even on the agenda of European economic politics. EU economic policy is focusing exclusively on the reduction of budget deficits. Due to this one-sided policy orientation, GDP is declining, unemployment is rising and therefore budgetary goals cannot be reached either.

During the bubble and its burst neoclassical economics was not able to contribute appropriately to economic analysis. Policy recommendations on the EU as well as on the
national level, however, are still given in a neoclassical way. This comes up, for example, in the EU’s “six pack” and “fiscal pact“ where restrictive fiscal policy is recommended as an answer to cyclically determined budget deficits.

What to do? How to stabilize an unstable, financialised economy?

Many economists have been pointing to the fact that the redistribution of income and especially of wealth has to be part of the way out of this crisis. Redistribution leads to an increase of disposable income for social groups with high marginal rates of consumption. It therefore lowers saving rates in a sustainable way and leads towards a consumption and demand-led growth regime. So we are back at the issues Michal Kalecki, John Maynard Keynes and also Kurt Rothschild were interested in.

References:


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Empowering economics: Some thoughts on policy and financial markets¹

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¹ I am grateful to Timo Boppart, Marc Chesney, Michel Habib, Peter Rosner, Jean-Charles Rochet and Rainer Winkelmann for valuable discussions and helpful comments. I alone, however, am responsible for the views expressed.
1. Introduction

Is economics a powerful discipline because it provides clever instruments to make money? Sometimes it looks so and some people think so. I do not. The historical rise of economics to a leading academic field, that over the last centuries has attracted many of the most talented and motivated people, is based on its nature as a science of men. Political Economy or Economics "is on the one side a study of wealth; and on the other, and more important side, a part of the study of man", as Alfred Marshall says us in the first paragraph of the Principles of Economics. Its power stems from the involvement in the analysis of the desires of people and how the means to satisfy them can be improved. "Bettering our condition" is the main goal, Adam Smith tells us in the Theory of Moral Sentiments. And he makes clear in the Wealth of Nations that this is no ego trip. "No society can surely be flourishing and happy, of which the far greater part of the members are poor and miserable." (Smith, 1776, Vol. 1, p. 88).

Many others - often with quite different political values like Karl Marx, John Maynard Keynes or Michal Kalecki - shared the view that economics has a mission in contributing to the bettering of life of the broad mass of people. To free workers from exploitation, to spare people from macroeconomic crises and guarantee full employment to them, to establish a fair distribution of income. A most important figure among them is of course Kurt W. Rothschild. I could almost summarize my claim by saying: The power of economics as a discipline lies for me in dealing with the "Rothschild-questions" about how to contribute to a "better" world. It is based on "the hope that with a better understanding of the economic mechanisms a contribution to a more satisfactory economic and social society could be achieved" (Rothschild, 1999, p.4).

There is another set of "Rothschild-questions" which is crucial for making economics a powerful scientific discipline. As emphasized by Rothschild from his article on "Price Theory and Oligopoly" (Rothschild, 1947) onward, we must bring market imperfections and economic power - "the rare birds of economic theory" (Rothschild, 2002, p. 433) - back into core economics. They must be acknowledged as basic features of reality and accounted for in economic analysis to make economics a relevant force in society. Finally, there is the "Rothschild conviction" that policy can make a difference, "that activism and interventionism are possible and useful when conditions are regarded as unjust or undesirable, particularly in regard to basic human needs and extreme inequalities" (Rothschild, 1999, p. 3).

With this paper I wish to contribute to the em-powering of economics by addressing some fundamental problems of economic power, political power and the financial system which many people are worried about today. In my view, they are related to new forms of power-
play and imperfections which require some daring changes in political and economic thinking and action.

2. Power


As an economist one might say, power is the possibility to influence the outcome of a system of interactions. What is the basis of such possibilities?

2.1 The basis of power

Under an economic perspective, the outcomes of interactions in the economic and political system are determined by desires and opportunities.

The opportunities are given by resource endowments, technology and organization, but also by the rules of the game (the order). In an uncertain world the determinants of opportunities may change. They depend on which state of the world is realized. In the jargon of modern economics the set of all possible states of the world, $S$, and the probability $\pi_s$ with which a specific state $s \in S$ is realized, are often called "nature" to express that $(S, \pi)$ are given exogenously and beyond the control of economic agents. However, for understanding what happens in modern financial markets we must not refuse to see that $S$ and $\pi$ can be influenced. I therefore prefer to address $(S, \pi)$ by the more neutral word uncertainty structure.

Realistically, all determinants of interactions described above are potential sources of power. Thus we have the following forms: (i) Controlling allocation of substantial amounts of resources. This gives to an agent market power to influence the equilibrium allocation of goods ($x$) and prices ($p$) and thereby also the distribution of income, among other things. (ii) Shaping technology and the organization of work. While traditionally technology was considered as given, the new growth theory has emphasized endogenous technological change including its implication for the distribution of income and wealth (see, for instance, the ample literature on skill-biased technical change). In a similar way the organization of work can impact on people in a powerful way. For instance, it can affect their employability as I tried to show some times ago (Falkinger, 2002). (iii) Setting the rules of the game. In Rothschild’s (2002) words: "influencing the framework which determines the working of market mechanisms" (p. 433). The division of power between policy, which defines and enforces the rules, and economic agents, who are playing according to the rules, may be
formally true but substantial power arises from the fact that rules are manipulated, influenced by lobbying activities, ignored or circumvented, in particular in irregular times. (iv) Influencing desires and mind-setting. For instance, "by 'immunising’ consumers more and more against rival invasion through massive advertising" (Rothschild 1947, p. 315). Persuasive advertising is one source of power. In view of the flood of information, including informative advertising, a new form of power becomes crucial: Focusing the perception set of people for instance by prominent positioning in the media. Moreover, in particular in times of uncertainties, there is room for what is called expectation or belief management. (v) Finally, as already mentioned, there is the possibility to affect the uncertainty structure.

Traditionally, the economic debate about economic power, for instance in competition policy or the theory of regulation, focuses on market power in the allocation of resources (type (i)), taking everything else - technology, economic and political order, preferences and uncertainty structure - as exogenously given. Partly this is a technical assumption, motivated by modesty or specialization in the division of labour between disciplines. However, as stressed by Rothschild many times, it often goes beyond that and turns into an ideological position. An example to which Rothschild (2002, p. 437) refers is the view prominently expressed by Böhm-Bawerk (1914), that in the long-run the will of economic agents or states to exert power or to influence economic outcomes are irrelevant, and only the power of economic laws prevail. Or, take in particular the so-called neoclassical production and distribution theory, according to which factor shares are determined by the factors’ elasticities of production. My own view is that technology plays indeed an important role in determining the distribution of market income which cannot be easily overcome by policy intervention. However, technology is not given by nature but rather results from investment decisions. Thus, though it is technology that determines the distribution, it is not nature but investment. While the awareness about the endogeneity of the technology and thereby the distribution of income has been substantially increased, at least in the growth and development literature, the

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2 In the words of Böhm-Bawerk, "daß ebenso wie die Gesetze des rein natürlichen Geschehens sich unabhängig von Menschenwillen und Menschensatzung in unabänderlicher Folge vollziehen, es auch im ökonomischen Leben Gesetze gebe, gegen die der Menschenwille, und sei es auch der mächtige Staatswille, ohnmächtig bleibt; daß auch durch künstliche Eingriffe gesellschaftlicher Gewalten der Strom des wirtschaftlichen Geschehens sich nicht aus gewissen Bahnen herausdrängen lasse, in die ihn die Macht ökonomischer Gesetze gebietisch zwinge” (p. 205). In particular: "auch in den Preis- und Verteilungsfragen wirkt die 'Macht’ offenbar nicht außerhalb oder gegen, sondern innerhalb und durch Erfüllung der ökonomischen Preisgesetze” (Böhm-Bawerk, 1914, p. 215).

3 See Guger (2011) for a discussion of Rothschild’s contribution to the theory of wages.
possibility that rules of the game, desires or uncertainty structure are products of economic actions is no familiar item on the agenda of economic research.

I think the main problems of current crises have ultimately to do with power of the form described in (iii) to (v). I will focus in the rest of this section on the "power-play" about the economic and political order (in section 2.2) and then turn to a more formal analysis of some basic aspects of man-made uncertainty structures (section 3) and to the power-play between citizens and financial gamblers (section 4). As outlined, the uncertainty structure has two components: the set $S$ of states of the world", and the probabilities, $\pi$, of these states. That $\pi$ can be influenced and powerfully exploited has recently pointed out by Magill, Quinzii and Rochet (2011). They show that, under complete financial markets, investment decisions which maximize the shareholder value lead to a distortion of $\pi$ and thus to an inefficient equilibrium outcome. My attempt in section 3 leaves $\pi$ untouched and focuses on variations of $S$ (by purposeful creation of states of the world).

One general remark on economic power is in order before turning to its interaction with political power. Rules of the game and uncertainty structure belong to the framework of the economic system, and are not factors within the system. This has two implications: First, they may be less vulnerable to influences from powerful economic agents in regular times, but they certainly are in fundamental crises. Secondly, agents need "systemic position" to exert pressure on the system. The economic basis of a systemic role is to be a provider of key factors of production to all industries. Basic industries, energy or the transport sector are relevant examples in history. But in present days, the financial sector is clearly the most salient one.

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4 Control of perception and expectation management are closely related to the uncertainty structure, since they determine which states of the world people have in mind and what are their beliefs about the realization of states. But it clearly goes beyond that and would require a systematic integration of media and mass communication in economic equilibrium analysis. See Falkinger (2007, 2008) for an attempt to go into this direction.
2.2 Political power and the power of policy

To assess the power of policy, in particular in comparison with the power of economic agents, we must evaluate the economic basis of this power along the determinants of power outlined in section 2.1.

Many discussions about the primacy of policy or the loss of this primacy seem to have the following framework in mind. In a kind of natural division of power, "nature" determines resources, technology and uncertainty structure; policy decides about the economic order; and economic subjects play within the possibilities given by nature and the rules set by policy. Such views are clearly naive. And any attempts to contain the current crisis by appealing to the primacy of policy along these lines are doomed to fail. As discussed previously, "nature" as well as the "economic order" are substantially influenced by economic forces. This does not mean, however, that compared to powerful economic agents policy is powerless in principle. Not at all. Before explaining this in more detail I have to define the words "policy" and "political power" more clearly. Since any power has an economic basis it doesn’t make sense to speak of political power as opposed to economic power. What does make sense, however, is to speak of political agents in contrast to economic agents. Both types of agents can have control over economic resources and thus can exert economic power in a conventional sense. Moreover, political as well as economic agents can influence policy and have thus political power. I therefore restrict in the further discussion the word "political power" to the capacity to define the rules of the game, the economic and political order. In contrast, I use "policy" to refer to a "business" or a "sector" - the public or political sector, run by political agents like "governments". Thus, the "power of policy" is the power of states, governments, the public sector, which has to be clearly distinguished from "political power" in the sense of effective rule and order setting. How powerful is "policy"?

(i) A first fact to notice is that policy has big economic power. It controls a large share of economic resources. The public sector share in industrialized market economies is between roughly 30 percent and 60 percent. Thus, no private sector has comparable economic power in influencing the allocation of economic resources and thus the distribution of market income.

5 In Rothschild’s (1947) words "firms become active agents which have the power to change those very market factors" on which conventional notions of price formation in markets rely (p. 304). Therefore, "the separation of the economic from the political must necessarily result in a very incomplete picture" (p. 317).

6 I am not talking about redistribution by taxes and transfers here, but about the fact that the demand for resources by the public sector affects equilibrium prices, in particular the factor prices.
Thus even without redistributive taxes and transfer, policy is the most powerful economic agent in a conventional sense.

(ii) Clearly, policy has also political power. In a formal sense, this is trivial because policy has monopoly rights in establishing legal rules and enforcing them. While it is naive to believe that this de jure monopoly automatically materializes in de facto power, the fact that formally rule-setting is the business of the political sector gives to policy an advantage over the private sector in the power play about rules and order, at least in ordinary times. However, if economic power is very concentrated or in deep crises the picture may become blurred. For instance, policy may be tempted to collude with the wealthy elite or is confronted with oligarchic pressure and more effective threats from system-relevant agents.

(iii) As emphasized at the end of section 2.1, for the de facto power in influencing the rules of the game the systemic position of an agent is relevant. Economically, an agent or an industry has a powerful position in the system if it provides key inputs to all the other agents and industries. The financial sector is the typical example. But despite the overwhelming role of financial services for households, firms and states, one should not forget that the political sector produces by far the broadest range of crucial inputs to economic activities, in particular by providing the legal and the monetary system. Without this system, there is no deal, in particular no financial intertemporal transaction. Hence, policy has also a power advantage by its systemic position even though it has no monopoly as a system-relevant player.

In sum, I do not share the view that the political sector is poor and helpless vis-à-vis some economic demons out there. Policy has a very strong basis for power, also from the point of view of de facto power. So why is the primacy of policy an issue? Turning means of power into effective power requires - like any other production process - effective organization and management of the means. In this respect, policy has currently clear handicaps compared to strong private players. Some of them are inherent to policy; others could be overcome in principle.

(i) Modern companies think strategically and pursue their goals by top down leadership. Their goals are very focused with clear priority to increase the value of the firm for its owners. Clearly, policy is a very different business. The goals have many dimensions and instead of support by usually a few shareholders the support by the citizens is required. Technically

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7 There are of course many other public goods which serve as intermediate inputs for private activities: Infrastructure, basic research but also public security and social stability.
speaking, aggregation of political preferences is much more complex than aggregating preferences over money. Thus, in this respect policy has an inherent handicap. This means, to the extent in which private agents enter the field of policy they face the same handicaps. Issues like corporate social responsibility or the discussion about shareholders vs. stakeholders may serve as an example.\(^8\) The lesson to be learned from this is in my view the following: Whoever wants to exert political power in crises must define some prime goal and seek some basic consensus on it. "If you only have one target, you can always meet it." Rothschild (2009, p. 145) meant this sentence as a critic of admirers of policies which brought down inflation - at the cost of other goals. In my view, however, in a serious situation, policy must focus on one goal and clearly communicate this goal - to the people, to get their support, and to the market, in order to effectively obtain control, and to stabilize the economic system such that then other urgent goals can be solved. I will describe below what the prime goal should be in my opinion.

(ii) Modern companies act globally, whereas policy is organized locally. This handicap of policy is not inherent to policy. The range of political organization units has changed often throughout history. The organization in the form of national states is not given by "nature", but can be changed. The second lesson to be learned is this: If we want to guarantee the primacy of policy in setting rules of the game, one has to bring the range of policy in line with the most powerful private agents. In my view, this does not mean that we have to wait for a world government. To some extent frictionless global mobility is more a threat than reality. Also a global player needs reliable support by powerful national governments or existing international organizations. Even if only the one or the other of them withdraw this support, the global player is substantially hurt.

What does this mean in practice, here and now?

\(^8\) See Franck (2011) for critical reflections on these notions in the light of a realistic picture of the governance problem of modern companies.
2.3 Disorder in the financial system and regulation

My view on the current situation is as follows: We have a serious crisis which requires extraordinary measures. The crisis is for me not confined to some specific events in the financial markets in 2011 or 200x, but consists in the fact that over the last twentyfive years or so the financial system got out of order. This applies also to specific current cases like the crisis of Greece. Neither would Greece have been able to build up the huge debt, if the international financial industry would not have been reckless, nor would the restructuring of Greece be detrimental if the European banking sector were sound.

The basic structure of the disorder is this: The mass of consumers and producers need some set of financial services and products (everyday payments, insurance, saving for durable goods and for old age, credits and equity funds for investment etc.). Technically, the households require financial products to bring their stream of income in line with the stream of life-time consumption. Priority lies on the stream of necessary and convenient goods, and what they fear most is the downward risk, in particular when getting older. See Binswanger (2004) for a rigorous model of loss-aversion in an OLG-equilibrium model of saving. See also Binswanger, 2007, for an application to pension systems. Therefore a stable banking and insurance system is vital for society. In the last decades, supported by economics and politics, a huge wave of so-called financial innovations has inflated the set of financial products and services provided by the financial industry. In theory, these financial innovations help to complete markets and allow ensuring risks which were uninsured so far. This may be true for some innovations and good for the one or the other agent who is exposed to specific risks. But more importantly, the innovations create new risks, in particular also for those who do not need these products in the first place. This has generated kind of a progressive inflation of financial products and transactions. Technically, this means that the uncertainty structure of the economy changes fundamentally, namely by an inflation of the set of states of the world. It is the purpose of section 3 to show this more rigorously in a general equilibrium model with asset markets. In section 4, I consider the relationship between financial innovations and the return-risk structure of the financial system from a more aggregate perspective. The bottom line is that the means employed to generate high returns created negative externalities in the form of social risks.

The prime goal of policy therefore must be to bring the financial system in order. A minimum action required is to separate investment banking from the banking sector for ordinary people and business, and that states and public funds, in particular pension funds do only engage with ordinary financial business. Ultimately, however, I doubt that putting the investment banking sector in quarantine is sufficient. Given the experience of the last twenty-five years, ordinary
people and firms, states and public communities, pension funds and ordinary banks will be tempted to try the gamble again if they see that some have become very rich in quarantine. "No man of spirit will consent to remain poor if he believes his betters to have gained their goods by lucky gamblings." (Keynes 1923, p. 24). Therefore, a stricter form of regulation may be needed for a credible and sustainable solution. In other industries we accept that potentially dangerous products have to be tested and go through some admission process before being supplied to the market. In a similar way, financial products which potentially affect the financial system should not be admitted to the market before the general equilibrium or macroeconomic effects are understood. Since financial innovations have the purpose to complete markets the proof has to be conducted in an incomplete market model. Moreover, because potentially dangerous products for the system affect in particular also producers and ordinary people, the model must include a production sector and ex ante heterogeneity of wealth of consumers. Return regulation could be an alternative measure. As argued in section 4, putting a cap or a progressive tax on the average return of financial agents (banks, funds and their managers etc.) would have a similar effect, since the extra-ordinary high returns are related to the boom of financial innovations which at the same time has produced extraordinary risks for the system.

One may argue that such policies would be quasi equivalent to closing down the investment banking and hedge funds industry, since a big fraction of derivatives and other products with high leverage do not pass the test. Well, all the worse if this is true. It proves that the system has got out of order and regulation is required. In a certain sense, the outlined proposal is nothing more than taking seriously recent initiatives of corporate social responsibility in business and finance. Some leading business schools and finance institutions even refer to the Hypocratic Oath in this context. Now, "nihil nocere" is an ideal which if interpreted strictly requires too much in an uncertain world in which nobody is perfect. But establishing procedures and regulations, which require careful examination of potential damages and side effects, and rule out products and treatments which potentially lead to epidemic damage or

9 The need for approval of financial products by a Financial Products Safety Commission was also stressed in the Commission of Experts of the President of the UN General Assembly on Reforms of the International Monetary and Financial System (Stiglitz, 2009). See also Crotty and Epstein (2009 a,b).

10 Keynes (1923) pointed out a more general socio-economic point. "The economic doctrine of normal profits, vaguely apprehended by everyone, is a necessary condition for the justification of capitalism." (p. 24)
whose social benefits are small compared to the system risks, is surely sound and good practice.

The financial sector is a global business. Is it realistic, that the outlined goal to bring the financial system in order by strong regulations can actually be achieved? I don’t know the future, but one should keep in mind that global leadership, and action on a clearly and narrowly defined goal does not require a global government. In my view, it is not unthinkable that the US, Europe or China - and possibly the one or the other big economy - alone or in combination - take a bold step of regulation that changes the global game. The wide-spread opinion among ordinary people but also business leaders, that something goes fundamentally wrong with the financial system, provides a strong political basis for such a step. If the established governments won’t do it other political forces will emerge. So at least the hope or rather the warning of Keynes in his *Tract on Monetary Reform* in the aftermath of the First World War: "Experience shows with great certainty that the active part of the community will not submit in the long-run to pay too much to vested interests, and, if the necessary adjustment is not made in one way, it will be made in another ..." (Keynes, 1923, p. 58).

### 3 Risk creation and inflation of financial innovations

In this section I try to formulate the role of an inflated uncertainty structure in an equilibrium model with asset markets. I do this in the standard framework of general equilibrium theory. In a first step the benchmark model of a perfect economy with asset markets is presented. Then I consider the following deviation from this benchmark: Some agents shift into an environment in which the set of states of the world is inflated by blowing states up in a multiple of uncertain states. *Pari passu* with this multiplication of states the asset markets are inflated by financial innovations which provide "insurance" for the new risks. In this otherwise ideal world, the inflation of the uncertainty structure generates two things: Business opportunities for the financial sector and transaction costs for consumers and firms.

Before turning to the detailed analysis I want to make a few general remarks. The first remark regards the role of financial innovations. In theory, financial innovations emerge because markets are incomplete. The missing of markets for states of the world of which we know that they may happen with a certain probability in the future creates a demand for financial products to "insure" these states. Therefore, financial innovations are rightly considered to be a good thing. In practice, however, apart from such true financial innovations there are other financial products for which it is hard to see which missing market they actually insure. If a new product just replicates the insurance function of already existing products, we have a useless product with a price that conveys no new information. This brings
me to my second remark. Inflation in the conventional sense of a change of the general price level of goods and services is considered to be costly because people have difficulties to disentangle changes in the price level from changes in relative prices. Thus, inflation distorts the quality of relative prices as signals conveying information about the scarcity relationships in the economy. I think that the inflation of financial innovations and the flood of prices for new financial products generates much more confusion about relative prices and thus the true economic scarcity relations than a change in the price level. In an ideal world with perfect and complete markets this could not be, but the reality is that a price of a financial product is noise if we do not know which missing market is completed by the product and how it affects the equilibrium of the system.

My final remark is a comment on method. I do not think that the standard general equilibrium framework mirrors reality. For instance, there is always an unknown future - true uncertainty as it was called by Keynes and others, which does not boil down to a risky state of nature and a certain probability of realisation. But I also do not see a constructive alternative to the standard model, in which I could express my argument in a rigorous way. Given this state of our discipline, my approach in this section is the following. There is an uncertain world of economic fundamentals. Some of the uncertain economic fundamentals can be modelled as risky states with probabilities assigned. This is set $S$. The risky states in $S$ can be “insured” by financial products as explained by general equilibrium theory. Moreover, not all uncertainties of the world are exogenous economic fundamentals. On the one hand, there are random processes in nature, which do not interfere with any economic action. On the other hand, there are random processes which are created by economic agents. This gives room for risk exposition and financial innovations even if markets with respect to set $S$ are complete. By choosing this methodological approach I want to make sure that the far-reaching policy conclusions which follow are based on a firmly established theoretical ground. There are also true uncertainties of which I know nothing. The only way in which I can account for this unknowables is to keep in mind that my model is incomplete.

3.1 General equilibrium with asset markets: Baseline model

As benchmark I consider a simple perfect market economy with complete markets and rational agents (as outlined, for instance in Mas-Colell, Whinston and Green, 1995, Chapter 19).
3.1.1 Fundamentals

The economy is characterized by a set $S = \{1, \ldots, S\}$ of states of the world each of which occurs with probability $\pi_s, \sum_s \pi_s = 1$. There is one good (income) and a set $I$ of agents who are endowed with $w_{si}$ units of the good, $i \in I, s = 1, \ldots, S$. The goal of the agents is to maximize expected utility

$$EU_i = \sum_s \pi_s u_i(x_{si}),$$

where $u_i$ is a concave utility function and $x_{si}$ denotes the quantity of the good consumed by $i$ in state $s$.

3.1.2 Markets

There are $S$ Arrow-securities $r_s = (0, \ldots, 1, \ldots, 0)$ paying one unit of the good if state $s$ is realized. The spot price of the good is set to one in all states. Denote by $q_s$ the price of security $r_s$ and let $z_i = (z_{si})_{s \in S}$ be the portfolio of assets traded by agent $i$.

3.1.3 Optimal portfolio choice

After revelation of state $s$ an agent’s budget is $w_{si} + z_{si}$. Thus,

$$x_{si} = w_{si} + z_{si}.$$

Anticipating this when maximizing expected utility the agent chooses portfolio $z_i$ by solving

$$\max_{z_{si}} \sum_s \pi_s u_i(w_{si} + z_{si})$$

$$\text{s.t. } \sum_s q_s z_{si} \leq 0.$$
For logarithmic utility functions, \( u_t(.) = \ln(.) \), the first-order conditions give us for each \( s \):

\[
(4) \quad x_{is} = \frac{\pi_s}{\alpha_i q_s}
\]

where \( \alpha_i > 0 \) denotes the Lagrange multiplier for the restriction \( \sum_s q_s z_{si} \leq 0 \). Moreover, restriction (3) is binding under the optimal plan. This gives us, using \( z_{si} = x_{si} - w_{si} \), the condition \( \sum_s \frac{\pi_s}{\alpha_i} = \sum_s q_s w_{si} \) which reduces to

\[
(5) \quad \frac{1}{\alpha_i} = \sum_s q_s w_{si}
\]

because of \( \sum_s \pi_s = 1 \).

3.1.4 Equilibrium

Market clearing in the asset market requires

\[
(6) \quad \sum_i z_{si} = 0 \text{ for all } s.
\]

Note that (2) and (6) imply that also the spot market is cleared, that is, \( \sum_i x_{si} = \sum_i w_{si} \) for all \( s \). Using (2) and (4), we obtain for (6)

\[
(7) \quad \sum_i \frac{\pi_s}{\alpha_i q_s} = \Omega_s, \ s = 1, \ldots , S
\]

where \( \Omega_s \equiv \sum_i w_{si} \) is aggregate endowment in state \( s \).

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11 A more general analysis, including the case of risk-neutral agents, can be found in a preliminary version of this paper (Falkinger, 2011).
Normalizing prices such that \( \sum_i \frac{1}{\alpha_i} = 1 \), we have:

\[
q_s = \frac{\pi_s}{\Omega_s}
\]

(8)

(Alternatively, we could choose \( q_1 = 1 \) or any other numeraire and adjust \( \alpha_i \) accordingly.)

Using (5) and (8) in (4), we obtain

\[
x_{is} = \Omega_s \sum_{\sigma} \pi_{\sigma} \frac{w_{si}}{\Omega_{\sigma}}
\]

(9)

Agents can fully insure their endowment risk up to the aggregate risk component \( \Omega_s \). In each state of the world, agent \( i \) consumes the same share of the aggregate endowment. If there is no aggregate risk i.e. \( \Omega_s = \Omega \) for all \( s \), each agent consumes her or his expected endowment. However, if there is aggregate risk, or if any non-zero mass of agents generates a systemic risk by inducing aggregate endowment shocks, all agents share the burden of this risk.

3.1.5 Transaction costs

Realistically, trading in asset markets has transaction costs \( K_i \) for a consumer. \( K_i \) may depend on the complexity of the world, in particular the number of uncertain states \( S \), but they may also vary with the agent’s ability to handle her or his wealth management. For instance, a financial agent can do it easily whereas a consumer may need to delegate this management to a banker. Finally, the cost may also depend on the effectiveness of the financial system. Professional financial intervention by a financial sector may lower the cost; market power and other imperfections in the financial sector will raise them.

The issue of transaction costs will play a more important role if I come to deviations from the baseline model. The important thing here is that the above analysis remains valid as long as such costs are charged lump-sum on the agent. The only thing that changes is the agent’s endowment, namely from \( w_{si} \) to

\[
\bar{w}_{si} = w_{si} - K_i
\]

(10)

which of course affects then the agent’s consumption possibilities and its utility.
3.2 An equilibrium model with risk-creation

Suppose now that a subgroup $I_{1\in I}$ of agents moves (or is moved) to an environment, in which, in each state $s$ of the world, $T - 1$ new uncertain alternatives emerge. For instance, they start careless projects which give them high returns if they are lucky and end in disaster otherwise. Or they save costs by abandoning quality controls or buffers for bad times. Another example are bets on real or synthetic random processes whose nature and relationship to the fundamental economic states of the world are not known or not understood.\textsuperscript{12} I call $I_1$ "risky agents". The other group of agents, $I_2$, are called ordinary agents. As a consequence of the exposition of $I_1$ to additional risk, the world consists now of $S \times T$ states, denoted by $s_t$ instead of $s$. If $t = 1$, we are in the baseline world with $w_{s_1 t} = w_{s_1}$. I therefore call $s_1$ "fundamental state". If $t > 0$, the risky agents face an endowment shock $\epsilon_{s_t}^i$. More precisely, we have

\begin{equation}
    w_{s_1 t} = \begin{cases} 
        w_{s_1} + \epsilon_{s_t}^i & \text{if } i \in I_1 \\
        w_{s_t} & \text{if } i \in I_2 
    \end{cases}
\end{equation}

where $\epsilon_{s_1}^i = 0$ and, for $t \neq 1$, $\epsilon_{s_t}^i$ is a positive or negative number. For simplicity, I assume that each sub-state $t$ occurs with probability $1/T$ so that

\begin{equation}
    \pi_{s_t} = \pi_s/T \text{ for all } s \text{ and } t.
\end{equation}

The new risk exposure clearly opens up a business opportunity for financial innovations. Suppose that markets are completed by new Arrow-securities $r_{s_t}$, $t > 1$, in addition to the securities for $s_1$ considered so far. Note first that also ordinary agents $i \in I_2$ have to trade in the securities for $t > 1$. Otherwise, since security $r_{s_1}$ pays only if $s_1 = 1$ is realised, $i$ would be uninsured in all other states. In an analogous way to the derivation of equation (9), we obtain

\textsuperscript{12} One may ask why a risk-averse agent should move to a risky environment. It is however a behavioral fact that some people (although risk-averse) participate in financial gambles, without being forced by insurance motives in the fundamental states of the world. For instance, buying complex derivatives can generate new risk exposure. Maybe there is indeed a gambling motive involved, maybe it is confusion or ignorance. Or seduction, imitation, overconfidence?
where

$$\Omega_{s,t} = \Omega_s + E_{s,t}, \ E_{s,t} \equiv \sum_{i \in I_1} \epsilon_{s,t}^i.$$  

This shows that in general also ordinary agents, which do not move to the risky environment and are not exposed to additional individual risks ($w_{s,t} \equiv w_{s,t}$ for $i \in I_2$), are affected by the risk exposition of risky agent. Only if $\epsilon_{s,t} = 0$ for all $t$, consumption as given by (13) coincides with (9). Otherwise, there is a systemic risk component, $E_{s,t}$, created by the move of $I_1$ to the risky environment.

Is there a possibility for $I_2$ to escape this systemic infection? In particular, suppose that asset markets are separated in the following way. For $i \in I_2$, the original Arrow-securities $r_s$ are available, paying in each fundamental state $s$ one unit of the good, regardless of which state $t$ is realized. In contrast, $i \in I_1$ has only access to the Arrow-securities $r_{s,t}$, paying one unit if and only if state $s_t$ is realized.

Then, we obtain in an analogous way to (9), for ordinary agents, $i \in I_2$,

$$x_{s,t} = \Omega_s^2 \sum_{\sigma} \pi_{\sigma} \frac{w_{\sigma,t}}{\Omega_{\sigma,t}^2},$$

and for risky agents, $i \in I_1$

$$x_{s,t} = (\Omega_s^2 + E_{s,t}) \sum_{\sigma} \sum_{t} \pi_{\sigma} \frac{w_{\sigma,t} + \epsilon_{t}^i}{\Omega_{\sigma,t}^2 + E_{\sigma,t}},$$

where $\Omega_s^j \equiv \sum_{i \in I_j} w_{s,t}, j = 1,2$. 

\[13\]

$$x_{s,t} = \Omega_s^2 \sum_{\sigma} \pi_{\sigma} \frac{w_{\sigma,t}}{\Omega_{\sigma,t}^2},$$

\[14\]

$$\Omega_{s,t} = \Omega_s + E_{s,t}, \ E_{s,t} \equiv \sum_{i \in I_1} \epsilon_{s,t}^i.$$
Comparison of (15) with (9) shows that $I_2$ may still be affected by the risk exposition of $I_1$ indirectly. Market segmentation may change the systemic risk component $\Omega_s^2$ compared to $\Omega_s$, as the relevant set of agents is reduced. Furthermore, whether or not the segmentation of markets is in the end to the benefit of $I_2$, depends on $\Omega_s^2$ as compared to $\Omega_s + E_{s|t}$. For a definite result suppose, for instance, that there is no systemic risk in the baseline, that is $\Omega_s^1 = \Omega_s^2 \equiv \Omega$. In this case, for $i \in I_2$, equation (15) and (9) coincide and give

\[ \chi_{si} = \sum_{\sigma} \pi_{\sigma} w_{\sigma i}. \]

Moreover, $i \in I_1$ is indifferent between separated and pooled markets, since (16) coincides with (9) in this case.

Thus, if there is no aggregate risk in the fundamental economy, if financial markets are perfect and if the completion of markets by new financial assets is costless, then there is no effect of risk creation on the ordinary agents under a separated banking system. This leads us to the central policy questions. Why do we see risk creation and inflation of financial innovations? And why is there resistance against the separation of investment banking from ordinary banking? The answer is to be found in the fact that things clearly are different in a more realistic world with transaction costs or other imperfections.

### 3.3 Risk creation and investment banking

I use the label "investment bank" for a risk-neutral agent $f$ with unlimited short selling capacity who designs and trades financial products and helps the other agents $i \in I$ in their portfolio management. They cover their cost by charging on $i$ a fee. It is assumed that the size of the fee rises with the number of financial products in the market or the number of states of the world. Moreover, it may vary with an agent’s average endowment to be managed. Finally if the investment bank has market power, the fee also covers rents of the bank. Agent $i$ may have other costs in addition. For instance, own transaction costs including time and worries involved in optimizing the portfolio. I assume that in sum the costs can be represented by an increasing function of the number of traded securities

\[ K_i(S) \text{ with } K_i'(S) > 0, \]
and that the investment bank earns a share $\mu$ of this cost. The other possible cost factors which were discussed are considered as shifts of $K_i(S)$. We combine now these transaction costs with the analysis of risk creation considered in the previous section.

There is only one important change: Endowment $w_{si}$ is now reduced to

$$w_{si} = w_{si} - K_i(S \ast T).$$

(19)

This has a clear consequence for the welfare assessment of separated financial markets for $I_2$ to which $I_1$ has no access. Under such separation, the relevant endowment levels would be

$$\tilde{w}_{si} = \begin{cases} w_{si} - K_i(S \ast T) & \text{for } i \in I_1, \\ w_{si} - K_i(S) & \text{for } i \in I_2 \end{cases}$$

(20)

Hence, a separate financial market for ordinary people, providing securities only for fundamental states, would be beneficial, since endowments are not burdened by transaction costs stemming from financial innovations for risky agents. Agent $f$, the investment bank, clearly has an interest in non-segmented markets since then its earnings are $\mu K_i(S \ast T) > \mu K_i(S)$ from all individuals, whereas under separated markets $\mu_i K_i(S \ast T)$ can be earned only from group $I_1$ while group $I_2$ generates $\mu K_i(S)$.

Moreover, the investment bank has an interest in risk-creation since this increases the opportunities to earn money from providing financial innovations. If the risk generated by risky agents creates need for the new financial products also among ordinary agents - all the better. For this reason, an investment bank may even incur costs for creating risk. Assume for the sake of illustration that $K_i(\cdot)$ is uniform across agents and let $n_1$ be the size of group $I_1$ (without counting $f$) and $n_2$ be the size of group $I_2$, respectively. Then, the bank’s expected income, $E\Pi = \mu \sum_i K_i(S \ast T)$ is

$$E\Pi^l = \mu(n_1 + n_2)K(S \ast T)$$

(21)

under non-segmented markets, and

$$E\Pi^s = \mu n_1 K(S \ast T) + n_2 K(S) < E\Pi^l$$

(22)

under segmentation.
This is clearly an extreme example which may be elaborated in many ways. In my opinion it conveys nonetheless a very important feature of our reality. Risk exposition of a subgroup of the population has systemic effects on everybody. In particular, it generates in interaction with unregulated financial innovations external effects on ordinary people who do not participate in risky actions. Furthermore, the creation and detection of risks opens up business opportunities for new financial products.

4. On the power-play between citizens and financial gamblers

I have argued that an inflation of financial innovations has generated a basic disorder of the financial system which carries over to the economy as a whole and finally puts the stability of the social order at risk.

In the previous section I outlined how such an inflation can emerge in an ideal financial market frame-work and who may potentially benefit from this inflation. It was shown that there is a conflict of interests between ordinary agents on the one side and banks - together with agents who expose themselves to a risky environment, on the other side. Reality is obviously much more imperfect and complex. However, the conflict between ordinary people and what - for lack of a better word - may be called "financial gamblers" (a coalition of bankers and financial investors with careless or seduced households, firms, communities and governments) has become a crucial topic on the political and economic agenda. In this section, I want to present what in my view are the fundamental elements of the game played by the financial gamblers, as seen from a macroeconomic point of view and without any reference to particular micromechanisms.

4.1 Financial innovations and the return-risk structure: An aggregate framework

Let $F$ be the set of feasible financial products and $\mathcal{F} = \{F_j \subset F | j \in [0, N]\}$ be the family of feasible combinations of financial products. Now, one of the most basic insights of finance is that different financial products generate different returns, where the level of return is positively correlated with risk. Let return and risk be denoted by $\rho$ and $\sigma$, respectively. In addition to the risk considered by the individual investor, there is also a social (or macroeconomic, or systemic) risk. Let the social risk be denoted by $\Sigma$. In sum, we have the following mapping

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13 The singleton $\{f\}$ represents product $f$. 74
\[(\rho, \sigma, \Sigma): \mathcal{F} \rightarrow \mathbb{R}^3\]

Let, for any constant \(\rho > 0\), \(\mathcal{F}_\rho := \{F_j \subset F | \rho(F_j) \geq \rho\}\). Furthermore, let \(\sigma(\rho)\) be defined as the minimal risk consistent with \(\rho\), i.e., \(\sigma(\rho) := \min \{\sigma(F_j) | F_j \in \mathcal{F}_\rho\}\). In an analogous way, define \(\Sigma(\rho) := \min \{\Sigma(F_j) | F_j \in \mathcal{F}_\rho\}\). With this notation we can collapse the complex and many-dimensional relationship between (combinations of) financial products and their risk-return structure in a two-dimensional picture as shown in figure 1.

In this figure, \(r_0\) represents the minimal-risk interest generated by basic financial products like treasury bonds. By using a richer family \(\mathcal{F}_1\) of financial products, for instance shares, one can achieve returns between \(r_0\) and \(r_1\) which are associated with higher individual risk and no social risk on top of the individual risk. This is the standard view of portfolio analysis. However, the financial developments in the last decades have led us beyond the region \([r_0, r_1]\). A flood of financial innovations has blown up \(F\) and family \(\mathcal{F}\) of combinations of products from \(F\). With a richer family of financial instruments returns beyond \(r_1\) have become possible - at the cost of higher individual risks (in line with the conventional picture). But now also external costs begin to emerge. These costs may come directly from the high

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14 To save notation I use \(\rho\) (and later also \(\sigma, \Sigma\)) as a constant as well as function symbol. The role of the symbol will be clear from the context.
individual risk-exposure $\sigma$. For instance, if the high $\rho$ is generated by high leverages, the capital basis may be too small to effectively bear the high $\sigma$ on a bad day. This may lead to the destabilisation of the whole financial system familiar from the "too big to fail" discussion. However, there may be other external costs as well. For instance, as shown in section 3, financial products which are beneficial to "financial gamblers" indirectly expose also the non-gamblers to uncertainty or forces them to participate in the new financial markets even if this implies transaction costs. The most severe external cost comes from confusion.\footnote{As discussed at the beginning of section 3, the central argument against conventional inflation (i.e. a rising price level) is, that people get confused with respect to the correct assessment of relative prices. The inflation of financial products however generates an ever rising flood of new price signals which confuses people and often distorts relative prices directly.} To emphasize this point, I propose to distinguish in the high-return world ($\rho \geq r_1$) two cases. Let $\mathcal{F}_2$ be the family of (combinations of) financial products generating returns in the bracket $[r_1, r_2]$ with corresponding individual and social risk patterns $\sigma(\rho), \Sigma(\rho)$. For example, take highly leveraged investments and derivatives. Furthermore, assume that there is an even richer family $\mathcal{F}_3$ of financial possibilities which generates returns above $r_2$. Now, a specific feature of sophisticated financial innovations in the securitization and hedging business has been the claim that they can insure risks, which have been uninsured so far; thereby providing to the investor a higher return without incurring higher risks.\footnote{See Gennaioli, Shleifer and Vishy (2011) for a model of financial innovations with securities that are perceived to be safe but in fact are exposed to neglected risk. As a result there is excessive issuance of such securities. They conclude that proposals like leverage control do not go far enough and regulatory attention should be paid to the scale of financial innovation.} In figure 1, this type of innovations is represented by the downward rotation of $\sigma(\rho)$ to $\tilde{\sigma}(\rho)$. If $\mathcal{F}_3$ were truly efficiency-improving innovations, $\Sigma(\rho)$ should be rotated downward as well. However, it has been repeatedly revealed by the financial crises that much confusion is out there and the "insurance quality" of sophisticated financial products is often illusionary rather than real. Symbolically, $\tilde{\sigma}(\rho)$ is actually a "broken" line.

The rich family of financial innovations, $\mathcal{F}_3$, promises to investors extraordinary high returns at low risk. The question then is: Who pays the cost of the actual individual and social risk implied by the extraordinary return?

The social risk ($BC$ in figure 1) is payed by the citizens anyway (as households or firms, who do not play in the high-return gamble, or as taxpayers). In addition, many arguments put forward in the recent policy debate by representatives of the financial sector require from the
citizen to cover also the illusionary individual risk reduction $AB$. The argument is blunt as this: Markets do require return $\tilde{r}_m$. Therefore, the public has to make sure that $\tilde{r}_m$ can be delivered. One may see here a version of what according to Rothschild (1947) is a basic feature of oligopoly power: "the desire for secure profits" (p. 308). And the opposition of big banks to be split up could be explained by his conclusion that "size" is one of the means to secure profits, among others. More generally, the inflation of the uncertainty structure has the same harmful consequences which Keynes attributed to deflation. It effects "a change in the existing standard of value, and redistributes wealth in a manner injurious at the same time, to business and social stability ... In particular, it involves a transference from the active to the inactive" (Keynes, 1923, p. 118).

4.2 Policy action required

Crises provoke several types of reflexes among economists - reaching from neglect to fatalism. One reaction resembles to the phrase "Crisis? What Crisis?". Another one is: Let the market fever do its job and heal our sins, or rather those of the others. Also, some people want that the system totally crashes hoping that they then can take over. And finally, there is the story "Schocks happen, also big ones. It’s a random process". Such views either are naive and reckless, or they hide interests. I therefore think that besides political leadership also more academic responsibility is required. "In the long-run we are all dead. Economists set themselves too easy, to useless a task if in tempestuous seasons they can only tell us that when the storm is long past the ocean is flat again." (Keynes, 1923, p. 65).

Much of the current discussion has focussed on increased capital-requirements and restructuring procedures for big financial institutions. I think that both measures are very appropriate and may be also sufficient to the extent that the financial system operates in the medium social-cost region $[r_1, r_2]$. However, I do think that a more basic message has to be conveyed to the market. In particular, since the current disorder is more of the type illustrated in the region to the right of $r_2$ in figure 1. The most important message to the market is: We take actions so as to make sure that this region of the picture is closed down so that no more games can be played in this field. To calm fears that this is too radical an attack on

17 The often cited dictum of Keynes that "in the long-run we are all dead" has been taken by his opponents as proof of cynism or short-sighted opportunism. It is in fact the contrary, namely, a call to economists to take their responsibility in difficult times, as the full quote reveals.

18 This comes close to what Rothschild said in a newspaper interview brought to my attention by Gugler (2011, p. 49). "Im Kern geht es um eine ganz harte politische Frage: Darum, den enormen
capitalism, it should be remembered that also Smith supported financial regulation in the interest of the community and of a stable banking system by arguing that "the obligation of building party walls, in order to prevent the communication of fire, is a violation of natural liberty, exactly of the same kind [as] the regulations of the banking trade" (cited from the entry on Smith in The New Palgrave (1987, Vol. 4, p. 371), written by Andrew S. Shinner).

The question is of course, what are measures to make this message credible? If we believe in the relationships presented in section 1, there are only two possibilities: Either forbidding the tools leading the financial system into the high-risk-return region, that is, forbidding financial operations $F_3$. This measure corresponds to the recommendation following from the specific micro-economic considerations in section 3. As an alternative, the analysis in the more aggregate framework of section 4.1 suggests an indirect measure for achieving the same goal: Regulations of returns - either by a cap on the average rate of return or by a sufficiently progressive tax on returns. (I do not, in this rough analysis, distinguish between returns to owners and earnings to managers. They are lumped together under the $\rho$.)

Partly capital requirements have the same effect as a cap on returns, since high returns often are related to high leverage. The advantage of a direct rate of return regulation is that it eliminates also the attractiveness of other forms of careless investments. And there is the communicative advantage that the high-risk-high-return connection is addressed directly. One may argue that such a regulation destroys the incentives to innovate. Partly, this is exactly the purpose of the measure, namely to the extent that the inflation of damaging financial innovations is stopped.19 One should notice, however, that the incentives to provide a feasible $\rho$ efficiently are not affected by the proposed regulation. Another objection may be that typically the return of a single operation is by its nature uncertain and only revealed ex post so that return regulation is a random punishment. This is a misunderstanding. Any single return component may be random but the average rate of return of a financial player - a bank, a funds and its managers etc. - can only be extraordinary high if extraordinary risky tools are used. Therefore, the regulation of these returns hits its target - the risky instruments and actions.

finanz-wirtschaftlichen Komplex unter Kontrolle zu bringen, der in den vergangenen dreissig Jahren entstanden ist und mit dessen neuen Möglichkeiten enorme Gewinne zu machen sind."

19 One may also ask whether it wouldn’t be desirable from a macroeconomic point of view, to direct innovative energy more to productivity progress in the real economy rather than to financial innovations, which often are instruments to acquire a larger share of the cake rather than of producing a larger cake.
Finally, there is the question of whether the described policies are credible enough to be effective. Let me start to answer this question with a quite general remark. If there is some truth in the described positive relationship between high risks and high returns, and if there is some economic logic in the financial market left (otherwise the question of credibility has no meaning in the first place), then the message: We take action so as to bring down the high rates of return - directly or indirectly - is the only one message which is credible to the financial market and to the citizens. To illustrate the point, consider for instance the argument that banks will not be able to raise the capital they need, if they cannot deliver the high returns which the market has become acquainted to. Now, if a clear regulation credibly sends the message that there will be no such high returns any more in no bank, then the capital which is there in the market will go to where the return is highest within the given limits. If the capital in the market is too little, to supply to banks a stable capital basis, then the taxpayer pays anyway, in one form or the other. The most transparent and market-conforming way would be that in this case partly banks close down, partly the state re-capitalizes the banks and takes shares in return.

Finally, there is the argument of international competition that capital will shy away from locations with financial regulations. As argued in my general remark, this is only to be feared if the regulation is half-hearted and thus no credible sign that the financial system is brought in order. The business model, to bet on salvation by the taxpayer of a country, is only attractive for the short-sighted investor. Sooner or later also the taxpayer will go bankrupt. In other words, a location operating in the high-return-high-risk region in figure 1 will become a bad investment opportunity sooner or later. The competitive advantage is with the location in which credible regulation guarantees financial order. My guess is that bankers and investors know this - citizens anyway. They just wait that it happens.

5. Conclusion

Philosophy derives its appeal from questions like what is reality, what is truth or what can we know. Medicine has the promise to save lives or prolongue them, and physics supports our dream to reach the stars. The powerful appeal of modern economics as an academic discipline, since when it began to blossom in the age of enlightenment, is grounded on the hope of bettering our condition - not of a few of us but of the many. A regulated market economy, in which the productive forces unfold competitively and powers that exploit others or threaten the system are kept under control, has turned out as the appropriate economic order to achieve this goal.
Recent financial crises are no single events but a consequence of the fact that the financial system has got out of order over the last two or three decades. The nature of this disorder is an inflation of financial innovations which are meant to complete markets. But even if they do so for some of us, they generate additional risk for all of us. Technically, this means that the uncertainty structure of the economy is changed by blowing up the set of uncertain states of the world. This exposes everybody to new risks and increases the systemic power of financial agents who provide financial products and services to "insure" these risks or to deliver higher returns at the cost of increasing externalized risk. If the inflated uncertainty structure leads to a financial crisis, the powerful systemic role of the financial sector is exploited by requiring policy measures to save the system. The measures, if not paid immediately by the taxpayer to avoid recession, increase public debt which in turn is a threat on the system.

The damming of powerful economic forces like this requires a strong political power, in the sense of a power which effectively is able to set and enforce rules of the game. *De jure*, the state is the rule setter, *de facto*, however also political power has an economic basis and powerful private agents have political power too. This has led to proclamations about the primacy of policy to be regained.

I have argued in this paper that the primacy of policy is not in danger because of a lack of economic means of the public sector. States are very resourceful economic agents. An increase in the public sector share would therefore not contribute to regaining primacy of policy. The main handicaps of the public sector compared to powerful private forces are: First, aggregation of political preferences to a clear and narrowly focused goal is much more complex than maximizing wealth of an individual or the value of the firm. Second, policy is organized regionally in states while powerful private agents operate globally. Regaining the primacy of policy in the regulation of financial markets requires thus two things: a clearly focused goal and global political leadership. Such global leadership does not require a global government or global coordination on all possible things but the agreement of a few big players to take action on the one goal. This is not unthinkable to happen. The opinion that something is wrong with the financial system is widely spread among people and in the business world so that a clear goal to bring it in order by a well-targeted global action has a big potential of broad support.

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20 This is no statement on the optimal government share. There may be many reasons to change the supply of public goods or redistribution. The point is: For giving to policy more political power, no additional resources are required. States have already the most powerful resource basis.
The action proposed in this paper is regulation which eliminates the creation of risk, in particular systemic risk, by careless financial innovation. A minimal requirement is to separate investment banking from ordinary banking and that states and public funds withdraw from the further. A more credible and sustainable policy would be - in analogy to other industries, to admit only financial products to the market which have passed the following test: the issuer can show why the product closes a missing market and how it effects the general or macroeconomic equilibrium (including production and distribution). Alternatively, a cap or a progressive tax on the rate of return could be used to ban financial innovations which seek for high returns at the cost of the stability and efficiency of the system. It may be argued that such a measure would heavily bound the innovation dynamic in the financial industry. But such argument just proves that the regulation is well targeted and exactly fulfills the purpose to eliminate financial instruments which potentially destabilize the system.

Let me close with a remark on ideology or - to use another Rothschild-phrase - on the problem of "reliance on one eye only and blindness on all other eyes (of which there should be many)". Disorder and appropriate regulation of the financial industry are not matters of quarrels about who is the good guy and who is the bad one, or about who is more (im)perfect, the private sector or the public sector. Ideological battles on first principles are counterproductive here. Nobody is perfect and, if a system is out of order, bad guys in the public sector as well as in the private sector will exploit it. Appropriate regulation to bring things in order is therefore the common concern of ordinary people and responsible leaders in politics as well as in business and banking.

References


Discussant: Peter Rosner*

Comment on the paper by Josef Falkinger

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Sepp Falkinger has presented an interesting paper on a very timely question – namely the effects of financial innovations on the so-called real economy. Complaints about the tremendous growth of the financial industry triggered or at least enhanced by liberalisation of financial markets in some states are well known. Falkinger’s paper brings these complaints into the framework of analytic economic theory – particularly General Equilibrium Theory. He used the instruments provided by this theory in order to derive important results.

His treatment of the financial industry is traditional. This industry provides insurance against all risks. The risks in turn are given. Therefore he can use the results of GE theory as a starting point, namely that if there are complete sets of markets against given risks, the allocation is efficient. He distinguishes between two cases: one situation in which all agents are risk averse and the other in which a subset of agents is risk neutral – the financial intermediaries. In the first case nobody can insure against aggregate risks, in the latter case this is possible – as long as problems of liquidity can be ruled out. This is a standard result for the Arrow-Debreu world. For this world it is the case that higher returns go together with higher risks, however in the aggregate the returns as well as the risks are limited by the risks of the real economy.

This is not our world. We can observe a steady flow of new financial instruments, and the analysis of the consequences of these innovations delivers new insights. Falkinger sets his analysis in the following framework: he assumes that there is a subset of agents who make bets with higher expected returns and consequently with higher expected risks. That has effects for all others – externalities. First their risks might be increased and therefore more insurance is needed, for example as a given share of reserves of a bank may cease to be sufficient, higher reserves are necessary. That is tantamount to an increase of costs. We can observe it already. Second, transactions create costs, basically the income of the people working in the financial industry – usually with a high income – are paid by the rest of the economy. Falkinger mentions a third type of external effect: inflating the number of assets in an economy creates more and more noise. Everybody knows that daily shopping gets difficult when one has dozens of brands for each item one wants to buy. The number of assets goes to infinity as each asset brings a new risk and therefore a new insurance to cover it. In the traditional setting of mainstream economics, namely that external effects result in welfare losses and therefore need to be reduced by appropriate actions by the state, this paper makes a strong point for regulation of the financial industry without calling on anti-market economy feelings.

Three short critical comments are in order. The first relates to the GE context. The problem is the following: for a GE model it is assumed that technologies, endowments, institutions and
risks are given. It is appropriate to work out the welfare difference between two situations differing in a specific way – a comparative static analysis. The paper contains such an analysis, namely that introducing very risky bets can be welfare decreasing. However, the paper wants to show something different, namely what happens when suddenly some actors start to create such assets. In that case it is no longer true that there were a full set of Arrow-assets in the beginning, namely there were no assets to cover this contingency, but the risk was already there. In that case the comparative static comparison is not appropriate.

The second point is the following. The GE framework is set in a wider political economy framework. It is claimed that the financial industry has the power to create risks because the state has given up its power to set rules. The paper ends with the call for new regulations. This is somehow true, however only in a metaphorical sense. When we say a person or an institution has power, we mean it can act strategically. One can call a strike, state a law, subsidize a political party, bribe an official, pay for ads in a paper, set monopoly prices, etc. The state has power, as it can set rules. The financial industry may also have power, namely paying for lobbies or outright bribery. But this is not present in the model presented. In Falkinger’s model there are no actions by the financial industry, merely actions by agents who provide very risky bets. This is power in the sense of the power of the working class or the bourgeoisie, but it is not a case of power in the sense of strategic action. Therefore I have doubts in the expression of a ‘power play’ between the financial agents and the rest of the society represented by the state.

The third point concerns the fundamental question of whether the state has the power to regulate the financial sector, namely to curb the excess of a creation of more and more types of assets. One is tempted to say no. This can be a result of Falkinger’s paper. Everybody can agree that there can be bets which are too risky. But how do we decide what the appropriate level of risk is? What does it mean to be ‘too risky’? Second, there is an organised financial industry, which is covered by rules and regulations. But there is also a shadow banking system that is not regulated. If opportunities for profit between the two systems diverge too much the banking system may lose its impact. The growth of over-the-counter trade supplanting regulated and well-documented exchanges shows the danger. But as we know one should not give in to all temptations. Not to resist this temptation, namely to refrain from attempts to regulate the financial industry, is too dangerous. We simply have to do the fine tuning. This paper shows the direction, namely instead of calling upon sentiments against banks, good economic analyses can provide a basis for sensible regulations.
Heinz D. Kurz

Heterodox Economics in Austria:
The Case of Kurt W. Rothschild

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1 I should like to thank John King for his valuable comments on an earlier version of this paper, Ingrid Kubin, the discussant of my paper, for her useful observations and suggestions and the participants of the conference for useful discussions. It goes without saying that all remaining errors or misconceptions are my responsibility. All translations from German sources are mine.
1. Introduction

Heterodox economics (as well as its complement: orthodox economics), Austria and Kurt Rothschild are all time-variant concepts. Which heterodox economics? Which Austria? Which Kurt W. Rothschild? Three difficult questions to be answered in a single paper!? Poor me! Poor you!

Section 2 points out that major Austrian economists from Carl Menger via Eugen von Böhm-Bawerk, Joseph Alois Schumpeter and Friedrich August von Hayek to Joseph Steindl and Kurt Rothschild were heterodox economists of sorts. What changed over time was orthodoxy (and therefore heterodoxy). Interestingly, heterodox Austrian economists variously contributed in important ways to what was to become a new orthodoxy. The reverse also happened: once orthodox, some Austrian economists without substantially changing their own views became heterodox, because what is frequently called the “mainstream” changed. Kurt Rothschild’s Keynesianism is a case in point. Section 3 deals with what I consider to be the two main pillars of present-day orthodoxy, that is “marginalist” or “neoclassical” theory: Say’s law and marginal productivity theory of income distribution. Heterodox economists reject one of the two or both. Section 4 provides some examples in this regard. Section 5 specifies Rothschild’s heterodoxy in the terms elaborated. Section 6 draws the attention to Rothschild’s concern with developing a universal social science that seeks to overcome the current division of labour and research within the discipline and the detrimental effects of a fragmentization of knowledge. Section 7 turns to what Rothschild considered most important, and badly missing in much of economic analysis: a proper treatment of the role of power in society and in the economy. Section 8 discusses briefly the treatment of power in conventional marginalist economics. Section 9 then turns to the classical approach and the role of power in it. Section 10 directs the attention towards the implications of the presence of power for welfare economics, a field Rothschild was critical of. Section 11 concludes.

2. Austrian economists: heterodox by nature

“Orthodox economics” is not a well defined and unchanging entity through time and space, nor is “heterodox economics”. What was heterodox at some time may have become orthodox at another time, and vice versa. If there is to be progress in economics then any particular doctrine or theory is bound to be overcome sooner or later by a doctrine or theory that is radically different or just an improvement on the former.

Interestingly, major Austrian economists have been dissenters from what was the mainstream at their time, and actually have advocated points of view which eventually contributed
important ideas to what was later to become a new mainstream in economics or new orthodoxy. A few examples may illustrate this.

In the second half of the nineteenth century the younger Historical School, championed by Gustav Schmoller, dominated the profession in the German language area. Carl Menger, the alleged founder of an “Austrian school” of economics, challenged Schmoller in a famous debate, known as the *Methodenstreit*, in which the very nature of economics was in dispute. Menger opted in favour of a theoretical economics, whereas Schmoller advocated the view that economics was an empirical-historical-ethical subject.

Menger and Eugen von Böhm-Bawerk took issue with Léon Walras’s general equilibrium theory and the project of rendering economics a branch of applied mathematics. The formulation of economic matters in terms of systems of simultaneous equilibrium equations Böhm-Bawerk dubbed “a deadly sin against all scientific logic”: economics had to adopt instead a “causal-genetic method” that started the analysis from the needy individual. In terms of important concepts forged by Böhm-Bawerk (and other Austrian economists) that were included in the marginalist “tool box”, it suffices to mention the concept of a positive rate of time preference, the concept of the superiority of more roundabout processes of production, which anticipates the marginalist concept of substitution in production, and the related concept of the remuneration of factors of production according to their marginal contributions. Hence, at one time a dissenter, central concepts of Böhm-Bawerk’s theory filtered into what is the orthodox (marginalist or neoclassical) point of view today.

Joseph Alois Schumpeter (1912) on the one hand praised Walras’s theory as the “Magna Carta” of economics, but on the other hand saw its scope restricted to the “circular flow” of the economy, that is, the stationary state. The latter, however, is of only very limited interest, since according to Schumpeter the economic system is continuously in travail because of the innovations carried out by entrepreneurs and therefore cannot possibly be understood in terms of general equilibrium theory: development and equilibrium mutually exclude one another. Schumpeter also parted company with Böhm-Bawerk’s idea that time preference is a primal cause of a positive rate of interest, his idea of more roundabout processes of production and the idea that savings are the key to wealth and material well-being: a positive rate of time preference is a consequence rather than a cause of a positive rate of interest, technical progress need not always be more roundabout, and innovations rather than savings are the main source of wealth.

When John Maynard Keynes’s macroeconomics, centred around the principle of effective demand, was on the rise within the profession of economists, Schumpeter and Friedrich
August von Hayek opined different dissenting views, the former placing the emphasis on innovations and their disruptive character (“creative destruction”), the latter on government and the banking sector, which he considered to be destabilising the economy. And when Monetarism and new versions of marginalist orthodoxy gradually regained lost territory, Joseph Steindl steadfastly advocated a Kaleckian approach to macroeconomics.

In short, Austrian economists are a rebellious species and Kurt Rothschild is no exception to the rule. More precisely, depending on the changing nature of the mainstream during the time of Rothschild’s academic career, he was more or less heterodox: as long as Keynesianism was dominant, Rothschild’s dissent from the mainstream was negligible, whereas when so-called New Classical Economics advocated by Robert Lucas and his acolytes began to take over the discipline, his dissent became huge.

While, as has been stressed in the above, the very concepts of “orthodoxy”, “mainstream” etc. in economics are continuously changing, we may nevertheless specify elements of contemporary orthodoxy, which are but particular expressions of lasting elements of marginalist theory that by and large survived all changes in form and content of that theory. To these elements we turn in the following section. They define the background against which we specify heterodoxy in general and Rothschild’s heterodoxy in particular.

3. Today’s orthodoxy: Say’s law plus marginal productivity theory

For the purpose of this paper modern orthodox economics is taken to revolve around two ideas, or building blocks, that are intimately intertwined. These concern

- the determination of the volume of output as a whole and employment and

- the sharing out of that output amongst different strata of society.

Orthodox economics envisages output as a whole as subject to

- Say’s law (SL), which states in its marginalist version (which is not to be confounded with the version we encounter, for example, in Ricardo) that there is a tendency of the market economy, if left to itself, towards the full employment of labour and the full utilization of the capital stock.

There are some bold conditions to be met for this to be the case, such as flexible prices of goods and services and rates of remuneration of factors of production, the stability of the equilibrium and, most important, as Rothschild was to stress, perfect competition. Any market
failure is blamed on the absence of one or the other of these conditions. Hence the basic message of the theory is plain and simple: the market economy is self-regulating and tends to make full use of the productive resources at its disposition. There is, in principle, no problem of unemployment and idle plant and equipment. The economic system, if left to itself, solves these problems in an efficient way.

The second idea or twin core element of the marginalist doctrine is that income distribution is adequately explained by

- Marginal Productivity Theory (MPT), which states that in conditions of perfect competition the proprietors of the productive resources are remunerated according to the resources’ marginal contributions to the product. Wages (profits, rents) are high or low in proportion to whether the marginal productivity of labour (capital, land) is high or low.

For the marginal productivity theory to hold again bold assumptions have to be met, such as constant returns to scale in order for Euler’s Theorem to be applicable. We need not dwell on these, but remark that the two ideas – SL and MPT – are intimately intertwined. MPT presupposes the full employment of labour and full capacity utilization. With idle resources, as they are typically experienced in the real world, the system is not on its “production possibility frontier” and accordingly marginal conditions are not met. An excess supply of a resource, such as labour, is ideally seen to lead to a swift fall in the resource’s price, which increases the demand for the resource and possibly also decreases the supply of it. The marginalist economists interpret a failure of the system to reach the full employment of its productive resources as the result of rigidities of various sorts and outside interventions that prevent the market from working efficiently.

We may put the core idea of marginalism as follows: According to its “monotonic prejudice”, to use an expression coined by Piero Sraffa, methods of production of single commodities as well as techniques of whole industries or the entire economy can be ordered monotonically in terms of the capital-to-labour ratio with respect to the ratio of the rate of profits (rate of interest) to the real wage rate. With $q_{ij}$ giving the factor input use of factor $i$ per unit of output of commodity $j$, where commodity $j$ can also be an aggregate of commodities of given composition, and $p_i$ as the price per unit of the factor, the theory presupposes that

\[
\frac{\partial q_{ij}}{\partial p_i} \leq 0
\]
In words: factors that become relatively more expensive will not be employed in greater quantities (per unit of output).²

Can the underlying concept of “substitution” in production be generally relied upon, as marginalism contends? If the answer happens to be “yes”, then the marginalist intuition would be confirmed and markets could be considered to tend to clear (provided the above mentioned conditions are met). But if the answer happens to be “no”, what then?

4. Heterodox economics

Seen from this vantage point, heterodox economists reject either the first or the second or both building blocks of the marginalist doctrine. John Maynard Keynes (1936), for example, was perhaps the severest critic of SL and replaced it by the principle of effective demand, according to which there is no reason to presume that the volume of investment will oscillate around full employment savings. At the same time he tried to retain MPT, which, however, sits uncomfortably with the fact of idle productive resources. Piero Sraffa (1960), on the other hand, was perhaps the severest critic of MPT. He showed that the conventional principle of substitution between factors of production cannot generally be sustained. By analysing the problem of the choice of technique of cost-minimizing producers he found that the choice depends on the rate of interest (wage rate) and that with a change in this rate (and a contrary change in the wage rate) factor intensities need not move in the opposite direction to changes in relative factor prices, or, in obvious notation,

\[ \frac{\partial(K/L)}{\partial(r/w)} \leq 0 \]

need not be true. Reswitching of techniques and capital reversing thwart the orthodox message.

Interestingly, a positive rate of interest is not indispensable in order to see that nonconventional results may emerge even in conditions that appear to be strongly favourable to the marginalist approach, provided one focuses attention on full industry equilibrium. This means that one cannot typically entertain the partial-equilibrium-ceteris paribus method of analysis: a change in the wage rate, for example, typically has an impact on the other distributive variables (the rate of interest, rent rates etc.) and on relative prices. Ignoring this

² This is essentially a generalisation of the classical principle of diminishing returns in agriculture with homogeneous labour and homogeneous land and no capital goods.
impact is generally inadmissible, because it leads to results that may grossly, and perhaps even qualitatively, deviate from the results derived within a framework that takes into account the impact under consideration. As Arrigo Opocher and Ian Steedman (2012) show in a work in progress, even with a rate of interest equal to zero there is generally no reason to presume that quantities of factors employed (per unit of output) are inversely related to “factor prices”. This, however, spells trouble for the conventional marginalist argument, based, as it is, on the monotonic prejudice. In terms of the concepts used by the theory, the “demand curve” for a factor of production need not be inversely related to the factor price. If this is the case and the factor supply curve is upward sloping, as is usually assumed, the resulting equilibrium, if there is one, need not be stable. Yet, as economists such as Alfred Marshall have stressed, an unstable equilibrium does not explain anything and throws into doubt the explanatory capacity of the underlying demand and supply approach to the theory of value and distribution.

We are now in a position to identify the kind of heterodox position in economics Kurt Rothschild assumed. It goes without saying that over time he somewhat changed his position, but here we are only concerned with the stable and permanent part of his heterodoxy.

5. Rothschild’s heterodoxy: “realism” vs. “utopia”

There is clear evidence that Rothschild rejected both main pillars of the marginalist doctrine: he rejected SL and he was critical of MPT. His criticisms of SL and MPT permeate his entire work.

Say’s law. As regards SL, Rothschild variously stressed the fact that unemployment “is a serious economic and social problem … There are only a few periods during the past one hundred and fifty years, in which this problem did not attract the attention of politicians and the public, and these were partly exceptional on account of wars” (Rothschild 1988: 1). Hence in his view in capitalist industrial societies unemployment is not the exception to the rule, but the rule, whereas according to the orthodox view it is the other way round. The unsatisfactory state of affairs in explaining the World Economic Depression in the late 1920s paved the way for the success of Keynes, who argued “in accordance with reality, that unemployment is … an essential characteristic feature of ‘free’ market economies” (Rothschild 2004: 169). Conventional theory failed badly and Keynes offered the sought alternative to it. His realism was in marked contrast to the “Utopian” view of the perfect competition world of neoclassical theory (Rothschild 1971b: 9). Keynes understood that the money and financial markets were prone to instability; the investment process was subject to huge economic and political
uncertainties; prices and wages were sluggish, etc. “This leads to the insight”, Rothschild concludes,

‘that “market failure” is a “normal” by-product of the market economy, which can be mitigated or overcome by a “sage” economic policy. In strong contrast to the economic policy doctrine of the neoclassical paradigm, which regards state interventions basically only as derangements of a well functioning market process and sees bureaucratic “state failure” as the rule, Keynes stressed the positive role the state may play in stabilising an inherently unstable economic process.’ (Rothschild 2004: 170)

Keynes is said to have managed “to break old taboos of neoclassical theory against the regulating and ‘repairing’ state interventions”, and he did so “not only because of social considerations, but also in order to safeguard the acceptance and capacity of survival of the capitalist system” (Rothschild 2004: 176).

Marginal productivity theory. As regards MPT, from an early time onwards Rothschild questioned the explanation of the distribution of income and especially of wages in such terms. In The Theory of Wages (Rothschild 1954) as well as in the revised German version of the book, Lohntheorie (Rothschild 1963), he disputed the view that marginal productivity theory was “a complete theory of wages” (1954: 27). He insisted that work effort and labour productivity are not independent of the wage level, as MPT assumes; they are rather “a function” of that level (1954: 30). Rothschild thus anticipated an idea which was to become prominent in the efficiency wage doctrine and which can in fact be traced back to Adam Smith, who emphasized that high wages may induce labourers to work hard, whereas low wages may result in indolent, careless and even obstructive behaviour on their part.

In several of his publications Kurt Rothschild stressed that there is no such thing as “the economic theory, rather there are several theoretical approaches, which partly complement and partly contradict each other” (Rothschild 2004: 16). Some of these approaches, “for example the so-called institutional and evolutionary models, stress the necessity to assume a more comprehensive social perspective” (Rothschild 2004: 16-17). This was certainly according to Rothschild’s own taste. He added that “the criticism of the dominant neoclassical mainstream which is put forward under the heading of ‘The crisis of economics’ is not so much that its analyses are totally useless, but that because of their methodological confinement they are too much tied to a narrow formal framework that not only blocks the way towards, but also the view of important linkages or allows them only in a rather twisted manner” (ibid.: 17). Mainstream economics is said to set aside the “political element” and
focus on “pure theory”. Rothschild deplored the fact that only “economic efficiency” is being discussed, whereas the fact “that cultural, social and political conditions exert a decisive influence upon economic processes … is largely ignored by the ‘law oriented’ perspective of ‘Economics’” (ibid.: 18). He also chastised the “economic imperialism” that carries the paradigm of the utility maximising *homo oeconomicus* over to other spheres, such as politics. All this is said to be the consequence of a major reorientation in economics, away from an essentially philosophical view of human and social problems towards one that is informed by the natural sciences, especially physics (ibid.: p. 13). But economics is not physics or any of the other “exact” sciences and never will be. As we shall see below, Rothschild paid tribute to the boldness of economists, who sought to shape their field in the image of the natural sciences (Marx no less than the neoclassicals), but in the end, he was convinced, they followed a will-o’-the-wisp.

It is interesting to note that Rothschild was not much concerned with the problem of whether an economic theory is consistent and coherent. The measuring rod he used in order to assess the quality of alternative theories and doctrines was first and foremost whether they were “realistic” or not. Realism was not so much a question of the empirical fit of some econometric model. He rather relied on the judgement of the well informed observer, possessed of a knowledge of the various dimensions of the problem involved. In this regard he followed in the footsteps of Adam Smith and John Maynard Keynes.

Rothschild showed relatively little interest in the debates about capital theory in the 1960s and 1970s that involved major economists on both sides of the fence: advocates of marginalist theory and its critics. The crucial issue was whether the concept of capital in marginalist theory could be sustained. According to it the “quantity of capital”, whose relative scarcity had to be ascertained, can be given independently of, and prior to, the determination of the rate of interest and relative prices. “Capital” could thus be considered an original and not a derived magnitude of the economic system. (Below we shall come back to this issue.) The critics showed conclusively that the marginalist concept of capital cannot be sustained and that therefore income distribution cannot generally be explained in terms of MPT (for a summary account of the debate, see Kurz and Salvadori 1997: chapter 14).

It is surprising that Rothschild hardly took account of the debate, although it supported his heterodox position. Instead he kept drawing the attention to facts and factors above and beyond those contemplated within the marginalist framework, which might change things and even reverse allegedly well-established relationships between variables. He did not, however, take pains to show this in terms of models constructed for the purpose at hand. Rothschild was more on the lookout for missing influences and factors at work than for a logically impeccable
analysis of the interplay of given factors. Vis-à-vis marginalist theory he opted for “realism” rather than “utopia” in economics. This is also reflected in his search for a universal social science or, to use Bertrand Russell’s concept: a *science of power*.

6. Towards a universal social science: Smith, Marx, Russell and Keynes

As we know from Adam Smith, the division of labour may lead to substantial productivity gains, but it comes at a considerable cost: the fragmentation of knowledge. Hayek, in a similar vein, spoke of the costs and benefits of the division of knowledge in modern society. Smith and Hayek’s observations apply cum grano salis also to the division of labour and research in the social sciences. This is illustrated by the following event. On the occasion of her visit to the London School of Economics in November 2008, Her Majesty Queen Elizabeth asked the assembled scientific community why the financial crisis had not been anticipated and measures proposed and taken to fight it. On 22 July 2009 two Fellows of the British Academy answered the Queen in a letter (Besley and Hennessy 2009). They pointed out that while there had been warnings about imbalances in financial markets and in the global economy, a “psychology of denial” of the dangers involved is said to have emerged. “It was a cycle fuelled, in significant measure, not by virtue but by delusion.” According to the two authors, while individual risks and imbalances were perceived, “the failure was to see how collectively this added up to a series of interconnected imbalances over which no single authority had jurisdiction. ... Individual risks may rightly have been viewed as small, but the risk to the system as a whole was vast.” They concluded that “the failure to foresee the timing, extent and severity of the crisis and to head it off ... was principally a failure of the collective imagination of many bright people ... to understand the risks to the system as a whole.” In short, one problem was that economists and others missed the forest for the trees.

The negative impact of the division of labour among the social sciences was a major concern of Kurt Rothschild. Not for nothing he chose as the motto of his introduction to the Penguin reader *Power in Economics* Bertrand Russell’s statement:

‘Economics as a separate science is unrealistic and misleading if taken as a guide in practice. It is one element – a very important element, it is true – in a wider study of the *science of power*.’ (see Rothschild 1971b: 7)

This was indeed the *leitmotiv* of much of Rothschild’s work: without taking into account power relationships and re-integrating economics and other social sciences, economics will arrive at “unrealistic” and “misleading” results and will prove to be barren and irrelevant. The response of some of the leading advocates of so-called “New Classical Economics” to the
current world-wide crisis, its causes and remedies, illustrates what Rothschild in all probability had in mind. Certain parts of mainstream economics have turned out to be at best useless and at worst harmful, because they formulated the policies put in place that were co-responsible for what happened.

Paraphrasing Hayek, an economist who knows only economics cannot be a good economist. A good economist knows many things and is possessed of many capabilities and skills. In his book on the political visions of great economists Rothschild identified Keynes as a scholar who ideally met the requirements mentioned. He remarked that “we are living in a period, in which the new circumstances require in a particularly high degree new ‘visions’ about economic and political connections and their reciprocal conditioning and dynamism” (Rothschild 2004: 209). This was written prior to the current financial and economic crisis, which was gist to Rothschild’s mill.

Keynes possessed all the characteristic features and talents which, according to Keynes himself, made a great economist: he knew mathematics and history, was a statesman and philosopher and did not leave unnoticed any of the aspects that are characteristic of human nature and man’s institutions (Rothschild 2004: 20). Keynes also conceived of the economic process as a part and parcel of social and cultural development in general. He was, in terms of Schumpeter’s distinction between “method” and “vision” (Schumpeter 1954), both an economist, who revolutionised the method in terms of which the economic process was analysed, and he had a vision of the dynamism of the economic and social process as a whole. Keynes was “not only a successful theorist, but also a successful practitioner in the world of finance” (Rothschild 2004: 160-1). He made a substantial amount of money not least on behalf of King’s College, Cambridge. Keynes, very much like Adam Smith, was driven by a concern with fostering the “good” and “beautiful” and bringing it to society at large. Under the influence of George Moore’s moral philosophy he rejected utilitarianism and hedonism and developed a sentiment of responsibility towards society, which permeates his entire work (Rothschild 2004: 164-5). The philosophical underpinnings of Keynes’s position and the deeper motivation for his work and political orientation are best seen in four essays he published in Nation and Athenaeum, a journal he edited: “Am I a liberal?” (1925), “The end of laissez-faire” (1926), “Liberalism and labour” (1926) and “The economic possibilities of our grandchildren” (1930). While there are parallels with other economists, in Rothschild’s view Keynes was a “phenomenon sui generis” (Rothschild 2004: 161).
It must therefore not come as a surprise that Keynes was by far the most influential economist of larger parts of the twentieth century with an impact on economic theory, economic policy and politics more generally (Rothschild 2004: 159). Most important, perhaps, in Rothschild’s view, Keynes’s “purely” theoretical work “always started from real problems and real policy possibilities”. This is what fascinated Rothschild most. Keynes was not an economist with his head in the clouds, and like Marshall he had recourse to “verbal methods” when these corresponded better to a “fuzzy reality”. While a useful tool, Keynes used mathematics only “parsimoniously and in a ‘hidden’ way” (2004: 160). And whenever new facts became available, Keynes did not hesitate to take them into account and, if necessary, change his view. Any sensible person would do so.

It is interesting to notice that Rothschild counterposed Keynes’s point of view and general outlook with that of “neoclassical economics”. The “Keynesian revolution”, he maintained, was neither “a complete break with received theory, nor did all new elements come exclusively from Keynes” (Rothschild 2004: 168). Similar ideas had been put forward by Michal Kalecki and the German Carl Föhl. However, Keynes managed “to integrate the various elements in a convincing and broadly applicable theoretical framework that opened new ways to received problems, which at the time were particularly pressing and for which traditional theory could not find answers that were satisfactory theoretically and as regards their economic policy relevance.” (Rothschild 2004: 168) Against “traditional equilibrium theory” Rothschild argued “in accordance with reality, that unemployment is not an exceptional situation, but an essential characteristic feature of ‘free’ market economies” (Rothschild 2004: 169; emphasis added). Hence, conventional theory failed badly and Keynes offered the sought alternative to it. His realism stays in marked contrast to the “utopian” view of the perfect competition world of neoclassical theory (Rothschild 1971b: 9). Keynes understood that the money and financial markets were prone to instability; the investment process was subject to huge economic and political uncertainties; prices and wages were sluggish, etc. “This leads to the insight”, Rothschild concluded,

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3 When asked which was the most important influence upon his own thinking, interestingly Rothschild answered that the real “eye-opener” to him was not Keynes’s *General Theory*, which at first he did not understand, but Joan Robinson’s book *An Introduction to the Theory of Employment* (Robinson 1937).
‘that “market failure” is a “normal” by-product of the market economy, which can be mitigated or overcome by a “sage” economic policy. In sharp contrast to the economic policy doctrine of the neoclassical paradigm, which regards state interventions basically only as derangements of a well functioning market process and sees bureaucratic “state failure” as the rule, Keynes stressed the positive role the state may play in stabilising an inherently unstable economic process.’ (Rothschild 2004: 170)

What matters is to recommend the “right” measures, because obviously state interventions, if wrong-headed, may cause harm. Keynes is said to have managed “to break old taboos of neoclassical theory against the regulating and ‘repairing’ state interventions”, and he did so “not only because of social considerations, but also in order to safeguard the acceptance and capacity of survival of the capitalist system” (Rothschild 2004: 176). The kind of society Keynes had in mind combined three major goals: economic efficiency, social justice and personal freedom (see Rothschild 2004: 178). Keynes despised “the absurd love of money, which was half criminal and half pathological”, a judgement Rothschild shared wholeheartedly (Rothschild 2004: 180).

What was Kurt Rothschild’s view of Karl Marx? He admired Marx, the ““philosophical” economist” (2004: 73), but he did not follow him closely. He called him “the only one among the great economists and perhaps even among the social scientists who ventured … to connect and relate to one another the various social spheres – economy, politics, social relationships, culture – and who ‘dreamt the impossible dream’ (Don Quixote) to bring this complex network into a comprehensive perspective and theoretically under a single umbrella” (2004: 73-4). In this Rothschild’s position is similar to Schumpeter’s, who also held Marx in high esteem. In an interview he explained that “in Marx I was interested in the ideology and in the content” of the analysis (2006: 38). Interestingly he added that Marx showed that economics “has a certain proximity to exact, analytical thinking, just like physics”, and that “This is also the attraction of neoclassical economics to me” (2006: 38). But above and beyond this Rothschild admired Marx’s attempt to develop a universal social science, his concern with the lot of the labouring poor and his quest for a better and more just society, motivations Rothschild shared.

According to Rothschild the two most outstanding features of Marx’s analysis are, first, his understanding that capitalism is a “conflict prone system” and not a harmonious society and, secondly, his combination of the economic with a “sociological perspective” (2004: 82-3). This also allowed him to see the role of power, conflict and class antagonism in the economy and society (2004: 93). “Methodological individualism” and the idea that a society could be
analysed in terms of a representative agent – Robinson Crusoe – Marx would in all probability have rejected as utterly misleading, and Rothschild agreed with him (2004: 83–4). Marx has to be credited, Rothschild insisted, with having “provided more space for questions of distribution, power elements and the political dimension” (2004: 84).

The sociological-cum-cultural elements are perhaps best visible in the labour market, which according to Marx “is not a market like any other market”; it rather is a market on which “an unequal scramble over the sharing out of the product between profits and wages takes place” (2004: 84), and in which employers frequently prevail. Rothschild’s view of labour markets is similar (see, for example, Rothschild 1954 and 1988).

We now turn to the largely neglected problem of power in economics. We begin with a discussion of the problem in conventional marginalist economics.

7. Power in conventional neoclassical economics

In order to be clear about what is missing in neoclassical economics as regards the role of power, one ought first to be clear about what is there in this regard.⁴ We might start with Max Weber’s definition of power. Power, he wrote, “is every opportunity within a social relationship to realize one’s own will even against opposition, irrespective of the source of this opportunity” (Weber 1972: 28). The focus of mainstream economics, as Rothschild stressed, is perfect competition, and the reason for this is that it reflects in an ideal way liberty and equality in the economic realm or, in other words, a situation in which none of the agents on whichever side of the market possesses power and is thus capable of forcing other agents to come to terms with his or her will. Agents are price takers, not price makers. The existence of power is therefore conceived of in terms of deviations from the ideal state of perfect competition. But is it also the real state of an economic system or, at least, the state towards which any real market economy tends to gravitate?

The problem of “Power or Economic Law?” was famously formulated by Eugen von Böhm-Bawerk in a paper published in 1914 and directed at the view advocated by M. Tugan-Baranowsky et al. according to which the labour market reflects first and foremost opposed social powers and not demand and supply (Böhm-Bawerk 1914). Böhm-Bawerk’s answer contained two elements: First, social power acts through economic laws by affecting demand and supply. Secondly, positions of power will be reflected by extraordinarily high rates of

⁴ For the following, see also Kalmbach (2008: 88–91).
remuneration, which, however, are of a transitory nature, since they will attract competitors whose activities will wipe out the existing differentials. Hence, in Böhm-Bawerk’s view perfect competition was the appropriate focus of economic analysis.

This view was not generally shared by marginalist authors. They saw that there could be persistent deviations from perfect competition. The conventional marginalist concepts of power and “exploitation” go back to works of Arthur Cecil Pigou and Abba Lerner. In price theory the latter introduced the concept of a degree of monopoly, which equals the difference between the product price and its marginal cost, divided by the product price. Since in perfect competition the price is taken to be equal to marginal cost, the degree of monopoly is zero and there is no power at work in the system. Reformulating the degree of monopoly in terms of the Amoroso-Robinson formula shows that the degree of monopoly expresses the price elasticity of demand.

In a more general formulation deviations from perfect competition in both product and factor markets have to be taken into account. On the input side power is now reflected in a deviation of the remuneration of a factor from its marginal product. The price of one unit of factor service \( q_i \), can now be shown to be determined in the following way:

\[
q_i = \pi' p (1 - 1/\varepsilon)(1 + 1/\eta)^{-1}
\]

where \( \pi' \) is the marginal product, \( p \) the product price, \( \varepsilon \) the price elasticity of demand and \( \eta \) the elasticity of supply of the \( i \)-th factor service under consideration \((i = 1, 2, \ldots, n)\). If and only if

\[
\varepsilon = \eta = \infty
\]

the marginal productivity rule applies in its well-known form. Monopolistic and monopsonistic conditions imply that factors will not be paid their marginal products. This finding has prompted some neoclassical authors, especially Arthur Cecil Pigou, to speak of “exploitation”, thereby deliberately invoking a concept of Marx. However, the meaning of the concept is very different: Whereas in Marx only workers could be exploited, in the neoclassial conceptualization in principle each and every proprietor of a factor of production could be exploited by getting less than (the value of) its marginal product.

Hence within the confines just delineated power can also be dealt with by neoclassical theory and it is expressed through the economic laws at work. Power may be discernible both in product and factor markets and its effects are seen in terms of deviations of prices and rates of
remuneration of factors from what they would be in conditions of universal perfect competition. As Kurt Rothschild perceptively remarked, perfect competition has thus been advanced to the status of a norm against which reality is assessed. Due to certain optimality properties of perfect competition as they were derived within the conventional neoclassical framework this norm also played an important role in economic policy and especially in competition policy and Ordnungspolitik.

However, as Joseph Alois Schumpeter (1912) had already forcefully argued, the vision of the economic system expressed by the neoclassical doctrine is misleading in that it totally sets aside the role of innovations and dynamically increasing returns and the associated monopolistic elements that come with them. As we know from various publications of Rothschild, he basically shared Schumpeter’s respective misgivings. And he insisted that power was a much more pervasive phenomenon than reflected in the cases mentioned. Conventional neoclassical economics had dealt with only some of its dimensions, but had left out others, especially political, institutional and sociological ones. This of necessity led to a highly distorted view of the world.

How did classical economics deal with the problem of power?

8. Power in classical economics

Rothschild praised repeatedly the classical economists for their concern with the problem of power. He wrote, for example:

‘Early classical “political economy” right up to the days of J. S. Mill was fully aware of the sociological and power background of economic events. The writings of this era abound with remarks and hints at the interplay of market mechanisms and outside intervention. It was only in its later stages that the main strand of traditional economic thinking turned inwards towards “purely” economic matters, paying increasingly less regard to extra-market and power affairs.’ (Rothschild 1971b: 8)

Whilst I agree with the assessment that power played an important role in the classical authors, the important point to mention seems to me to be the fact that power came to the forefront within the classical authors’ analysis of the economic system. This was only possible because of their very different approach to the theory of value and distribution and a concept of value or price that differs markedly from the later marginalist one. In the latter, due to the full employment assumption normal prices are seen to reflect relative scarcities of factors of
production, whereas in the classical authors prices reflect the prevailing conditions of production and reproduction and the actual distribution of income between capitalists, land owners and workers. It is easiest to illustrate the classical approach in terms of the well known equations of production and relative prices in the simple case of single production, setting aside also the problem of land and rents,

\[ p = (1 + r)Ap + wI \]  
\[ d^T p = 1, \]

where \( p \) is the vector of “normal” or “natural” prices, or “prices of production”, \( A \) is the material input matrix per unit of output, \( I \) is the labour input vector, \( d \) is the vector of amounts of commodities constituting the standard of value or numéraire, \( r \) is the competitive rate of profits and \( w \) is the wage rate in terms of the standard. These equations have been studied in great depth (see Sraffa 1960 and more recently Kurz and Salvadori 1997). For a given system of production in use, defined in terms of the input requirements of means of production, \( A \), and labour, \( I \), one can show that there is an inverse relationship between the general rate of profits, \( r \), and the real wage rate, \( w \), and the vector of prices is typically a complex function of one of the distributive variables, e.g. \( r \), given \( A \) and \( I \), that is

\[ w = f(r), \text{ with } dw/dr < 0, \text{ and} \]
\[ p = p(r) \]

for economically feasible levels of \( r \) (and non-negative levels of \( w \)). Equation (7) reflects David Ricardo’s fundamental law of distribution: “The greater the portion of the result of labour that is given to the labourer, the smaller must be the rate of profits, and vice versa” (Ricardo, Works VIII: 194).

This was the first clear analytical expression of what Adam Smith had bothered a great deal: the conflict over the distribution of income between “workmen” and “masters” in chapter VIII of book I of The Wealth of Nations (1976, WN, I.viii). Smith had stressed:

‘What are the common wages of labour, depends every where upon the contract usually made between those two parties, whose interests are by no means the same. The workmen desire to get as much, the masters to give as little as possible. The former are disposed to combine in order to raise, the latter in order to lower the wages of labour.’ (WN, L.iii.11)
Due to differences in the power of each party, wages will be higher or lower and profits correspondingly lower or higher. As regards the main determinants of the two parties’ relative power, Smith mentioned especially the size of each party – an argument that foreshadows the problem of collective choice and action, political and institutional factors, such as the prohibition of strikes etc., and the fact that in conflicts workers cannot hold out for a long time due to a lack of resources. Therefore he saw the masters to have commonly “the advantage in the dispute, and force the other party into a compliance with their terms” (WN, I.viii.12). I suspect that Smith would not have been surprised by the huge bonuses paid to managers in recent times despite worsening performances and even bankruptcies of the companies they led. Smith knew well the East Indian Company and the working of “clubs” and understood what it meant, if there was no competition and no countervailing power and managers were able to determine their salaries and gratifications by themselves.

Economic, social and political power speaks through the above equations. The “scramble for the surplus”, that is, the conflict over the distribution of income, can be expressed in terms of them. For example, the greater is the power of trade unions, the higher the general level of real wages and, correspondingly, the lower the rate of profits. Due to different proportions of labour and means of production in the production of the various commodities, different constellations of \( r \) and \( w \) will typically also lead to different systems of relative prices.

Generalisations of the above equations allows one to study the implications of deviations from free competition. If, for example, different industries exhibit different degrees of monopoly than this can be reflected in differential rates of profit. Or if different trade unions are differently effective in advocating the interests of its members in wage negotiations, then this will be reflected in differential wage rates. In this way one can express both what Adam Smith and Karl Marx called “class conflicts” and what Alfred Marshall called “trade conflicts”. Clearly, for a given overall real wage rate the rate of profit obtained in one industry is inversely related to at least one rate of profit in another industry, given the system of production in use. And given the general rate of profits the wage rate paid for one kind of labour is of necessity inversely related to at least one wage rate paid for another kind of labour. Therefore, when the CEO of the Deutsche Bank, Ackermann, put forward the proposition that the bank must earn at least a rate of return of 25%, this ought to have been understood by workers and/or other sectors of the economy as a sort of declaration of war.

9. Welfare economics

A crucial assumption of neoclassical economics in general and of welfare economics in particular is that agents are possessed of autonomous preferences and that therefore “supply”
and “demand” can be envisaged as entirely independent from one another. However, the realism of this axiom has been questioned from an early time onward. For example, John Maurice Clark stressed

‘Economic wants for particular objects are manufactured out of this simple and elemental raw material [primitive instincts] just as truly as rubber heels, tennis balls, fountain pens, and automobile tires are manufactured out of the same crude rubber. The wheels of industry grind out both kinds of products. In a single business establishment one department furnishes the desires which the other departments are to satisfy.’ (Clark 1918: 8, emphasis added)

And several years later Frank H. Knight insisted that “one of the most fundamental weaknesses of the market system is the use of persuasive influence by sellers upon buyers and a general excessive tendency to produce wants for goods rather than goods for the satisfaction of wants” (Knight [1934] 1982, emphasis added).

Alas, this possibility of agents using part of their property – their “endowment” – to alter, in their favour, the needs and wants of those with whom they deal and exchange is neglected in conventional neoclassical theory. The Arrow-Debreu model, which purports to be “general”, sets completely aside this possibility, which according to both Clark and Knight is ubiquitous in market economies.

Rothschild shared this concern. In his work on welfare theory (see, in particular, Rothschild 1992) he questioned the usefulness of this branch of mainstream economics and arrived at the conclusion that “the ambition of New Welfare Economics to find on the basis of economic-theoretical constructions an ideology-free ‘scientific’ basis for ethical-economic value judgements has not been satisfied and presumably cannot be satisfied” (1992: 56).

Indeed, if power, i.e. resources of one sort or another, are used to shift the preferences of some other market participants, then the usual results of Welfare Economics, whether Old or New, fall to the ground. How is one to make a welfare comparison of two alternative economic equilibria which differ because in one of them resources have effectively been used to make some of the agents’ preferences different from what they would have been in the

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5 Rothschild (2009: 568) lists in addition a number of further difficulties welfare economics encounters, including the one already mentioned by J.E. Meade, that in conditions of increasing and decreasing returns “one cannot deal separately with the question of ‘size’ and ‘distribution’.”
absence of such resource use? Obviously, one cannot ex definitione have recourse to a straightforward Paretian Welfare Economics approach. Vis-à-vis the nature of the difference involved the approach is inapplicable. One might compare the two alternatives from both the perspective of the preferences before and after the change. But there is no presumption that the two rankings will be the same.

With his insistence on the importance of taking power into account Rothschild has put his fingers into an open wound of neoclassical theory and especially Welfare Economics. He has done so from an early time onwards. Alas, those whom he addressed took little notice of his warnings. His final verdict on New Welfare Economics was that its dream “to find an objective indicator for making welfare judgements regarding welfare changes that is accepted by everyone and that can be used for policy decisions” did not come true (Rothschild 2009: 571).

10. Empowered economics vs. a “power-free” economics

Put in a nutshell, Rothschild was disenchanted with conventional neoclassical economic theory because it portrays the economic world as if was largely “power-free”. This is its major shortcoming. Looking at the world through the prism it proposes is like looking at it with blinkers that cut out what is truly important. This kind of complaint can be found already in early contributions of Rothschild, especially in his edition of the Penguin reader *Power in Economics* in 1971, and was emphasized again in a recent essay by him entitled “The absence of power in contemporary economic theory” (Rothschild 2002).

To be clear, Rothschild admits that monopoly power and bargaining power are dealt with in mainstream economics, and in game theory and other more recent developments there are also attempts to come to grips with other aspects of the problem at hand. But the few and timid attempts highlight all the more the absence of the problem of power in conventional economics. Why is it that power is given short shrift in neoclassical economics? Rothschild sees essentially three reasons:

1. Economics is under the spell of “the sheer force of tradition”, which explains to some extent the “‘hysteresis’ of power exclusion” (2002: 436). The tradition under consideration is said to have been started by Adam Smith with his emphasis on competition and to have been continued “in the 19th century from Ricardo to Marshall”; it is said to have led up to “the important and impressive structure of classical and neoclassical economics with power remaining on the sidelines” (2002: 436).
2. There is the “fear that the ‘scientific’ structure of the neoclassical edifice could be contaminated by … sociology, psychology, and non-neoclassical economics” (2002: 439). Economists who pride themselves with having established a “hard” or “exact” science in the image of physics insist on “rigour” to the detriment of relevance.

3. The request that science ought to be “value-free” and non-ideological has contributed to “the dominance of a ‘powerfree’ neoclassical theory” (2002: 440), which allegedly meets this request.

To my great surprise Rothschild in the first reason given put together Adam Smith and the classical economists on the one hand and the marginalist authors on the other, although we have heard in Section 8 above that the classical economists cannot be accused of overlooking the problem of power. Even in the 2002 essay Rothschild reiterated his earlier point of view. And in his 1971 edition he stressed: “Early classical ‘political economy’ right up to the days of J. S. Mill was fully aware of the sociological and power background of economic events” (1971: 8). What apparently prompted Rothschild to place the classical and marginalist authors in the same camp of powerfree economics is that he identified the classical concept of free competition with the marginalist concept of perfect competition. He wrote, for example, that “one of the most important causes [leading to a powerless economics] was the complete victory of ‘perfect competition’ as the basic model for economic theorizing” (1971b: 8). He then even associated the classical economists with the Chicago school and the Neo-Liberals of the Freiburg school in Germany (1971b: 9, fn. 2).

In my view this is based on a misconception. The free competition of classical economics is an entirely different animal compared to the perfect competition of marginalism. Free competition means the absence of barriers to entry in and to exit from markets and implies a tendency towards a uniform rate of profits and a uniform wage rate for each and every particular kind of labour. It does not mean that there is no power, as we have seen with regard to Adam Smith’s view of the scramble for the surplus. Contrary to the marginalist concept of perfect competition the classical concept of free competition does not postulate an infinite number of agents both on the supply and on the demand side of the market. In Smith’s case employers are powerful essentially for the three reasons given and can push wages down to a social and historical subsistence level, unless a brisk accumulation of capital implies a rapid growth of the demand for “hands” and wages are bid up to levels above subsistence.

As regards his first reason, Rothschild relies on a passage in John Hicks’s Value and Capital, first published in 1939:
It has to be recognized that a general abandonment of the assumption of perfect competition, a universal adoption of the assumption of monopoly, must have very destructive consequences for economic theory. Under monopoly the stability conditions become indeterminate, and the basis on which economic laws can be constructed is therefore shorn away … It is, I believe, only possible to save anything from the wreck – and it must be remembered that the threatened wreckage is that of the greater part of general equilibrium theory – if we can assume that the markets confronting most of the firms with which we shall be dealing do not differ very greatly from perfectly competitive markets.‘

(Hicks 1946: 83-4; quoted in Rothschild 1971b: 10, fn. 4, and Rothschild 2002: 439)

While abandoning the assumption of perfect competition may be bad for neoclassical theory, it would be good for economics in order to increase its “realism”. To paraphrase the late Paul Samuelson: economists have not been born to live easy lives, but to address the economic problems that are out there.

As regards the second reason, Rothschild disputed time and again the claim that economics is or could ever become a sort of social physics. By the nature of its object of study and the latter’s complexity economics is bound to be, and remain, a soft science, he insisted (see Rothschild 1991: 12). Closely related to this, he dubbed the view that only deductive reasoning and mathematical models should count as economic science “nonsense” (Rothschild 2009: 152).

As regards the third reason, it is easy to show that whilst ideological elements have demonstratively been thrown out by the front door of marginalist economics, they have re-entered the edifice by the back door. This is a recurrent theme in Rothschild’s work and expresses his scepticism as to the possibility of a “value-free” economics. In this regard Rothschild’s view is again very Schumpeterian with its emphasis on the role of “vision” in shaping an author’s perception of the world.

11. Concluding observations

Rothschild’s heterodoxy comes well to the fore in the following statement. “When you ask me where I stand, I don’t know” (2006: 39). He added:

‘In principle there is mainstream economics, neoclassical theory, and there are the heterodox economists. This is an absolute chasm. There are also
differences between heterodox economists, but this is the big chasm and there
is one variant that rejects neoclassical theory a hundred percent and calls it the
wrong way. – And then there are others, who say that neoclassical theory has a
certain justification, that it is one of several possible aspects. … I reckon that I
myself belong to the second group.‘ (2006: 39)

Rothschild was an eclectic. He picked up from the different economic traditions what he
considered to be sound and helpful and therefore he did not (want to) belong to any one
school. His was critical of the mainstream, but he did not entirely dismiss it. He also did not
wish to build a school himself and transform students into close followers of his ideas. Instead
he was keen to expose them to alternative ways of seeing a particular problem and to enrich
the picture by bringing in political and sociological aspects. His ideal was a universal social
science that took into account all facets of economic life. He opted for greater realism in
economics, for a greater down-to-the-earth approach and deplored “the complete victory of
‘perfect competition’ as the basic model for economic theorizing” (1971b: 8). Conventional
marginalist theory, he maintained, is hooked on an “Utopian formulation of society in which
power is so widely and thinly distributed that its influence can be neglected” (1971b: 9).

In Rothschild’s view basically all theories are more or less incomplete, qua theories, because
they always set aside factors that are at work in the real economy. Marginal productivity
theory “will be of immediate value in interpreting the wage situation” (1954: 27), provided
the situation under consideration comes close to the one contemplated by the theory.
However, there are two reasons why this is typically not the case. First, man is indivisible and
therefore the marginalist mode of thinking does not apply fully. Secondly, there is “the
economy of high wages” (1954: 29). As Adam Smith had already argued, high wages may
spur labour productivity: “The higher wage and the higher standard of living that goes with it
will increase the productivity of workers” (1954: 29). But this effect of high wages is
typically ignored by marginal productivity theory. Therefore, a higher real wage rate need not
lead firms to reduce employment. If firms take into account the positive impact of high wages
on labour productivity, higher wages may lead to an increase in employment and not to a
decrease. The conventional neoclassical view of the labour market and thus of the economic
process as a whole cannot generally be sustained.

Rothschild’s view was panoptic, not monomanic: he saw many things at work in society and
in the economy and not only one thing.
**References**


Discussant: Ingrid Kubin*

Comments on the paper by Heinz Kurz

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I found the presentation of Heinz Kurz very interesting and stimulating. It gives an excellent and impressive account of Kurt Rothschild’s scientific position, in particular with respect to Smith, Ricardo, Marx and Keynes as well as the Austrian economists Menger, Böhm-Bawerk and Schumpeter. I would like to add some comments:

My first and most striking observation is that Heinz Kurz draws a very broad sketch of heterodox economics, encompassing Carl Menger, Böhm-Bawerk, Schumpeter, Hayek, Steindl and Kurt Rothschild – a very diverse group of economists indeed. So what do they have in common? Heinz Kurz argues that all of them challenged some elements of the “orthodoxy” of their time, developed new ideas, and some of them became part of the “new” orthodoxy – Kurz portrays the “orthodoxy” as evolving over time by incorporating elements that were once considered “heterodox”.

1. I am very sympathetic with this view; when reading it, it immediately reminded me of the positions David Colander put forward recently and which I would like to recapitulate: Colander differentiates between

   – Mainstream and “the cutting edge” of it
   – Orthodoxy and
   – Heterodoxy.

For Colander, Mainstream and its cutting edge is the today’s evolving and constantly changing science in which many new ideas are formulated and tried out in discussions; most of the new ideas are rejected and only some of them survive. Although – or perhaps because – he is a very close observer of the current scientific discourse, Colander stresses that it is difficult to define a static core of this dynamic and constantly changing Mainstream.

In contrast, for Colander the Orthodoxy is the static representation of “what historians of economic thought have classified as the most recently dominant “school of thought” (Colander et al, 2004, 490). It can only be defined in retrospect; it is an abstraction and never represents what the mainstream was doing back then or currently is in fact doing.

Mainstream economics and its cutting edge evolve in constant dispute with the Orthodoxy – accepting some of its elements, challenging others, and eventually replacing them.
Colander puts in that group economists such as Samuelson, Arrow, Solow, Schelling, Sen, Stiglitz, Sims, Woodford, Akerlof, Thaler, Krueger, Bhagwati (Colander et al., 2004, 493) – a list similar and complementary to the one put forward by Kurz.

For Heterodoxy – according to Colander – it is not easy to find its place: For Heterodoxy it is tempting to define its position with respect to Orthodoxy which provides a clearly defined “school of thought” as a focus for heterodox research interest and criticism. That is a comparatively comfortable – but potentially sterile – position. The alternative for Heterodoxy is to seek a more challenging – but potentially more rewarding – position; i.e. a position with respect to the Mainstream from which to contribute and influence the ever changing “cutting edge” of the Mainstream. In this view, Heterodoxy shares actually much with the mainstream and its cutting edge: “… both mainstream and heterodox economists are working on issues that challenge neoclassical orthodoxy …” (Colander et al, 2004, p.492).

I definitely agree with Heinz Kurz that Rothschild found his position in the latter, trying to influence the “cutting edge” and/or taking from there ideas/models that he considered relevant for his subjects and questions.

2. Having drawn this picture of a quite fuzzy mainstream and its cutting edge, can Colander say something about its definition? He claims that it is method that ultimately defines the current Mainstream in economics (see Colander, 2000, 137), and provides a definition that Keynes put forward in a letter to Harrod in 1938:

“Economics is the science of thinking in terms of models joined to the art of choosing models which are relevant to the contemporary world.”

I admit that might be a bit overoptimistic with respect to the current Mainstream – I would like to share this position as a form of calculated optimism but perhaps this is only wishful thinking. However, I am deeply convinced that this was indeed the position of Kurt Rothschild.

3. Returning again to the picture of a fuzzy, experimental cutting edge of the mainstream, the question arises how those ideas disseminate to the rest of the profession. Colander points to the important role of teaching in that process (Colander et al, 2004, 493). Kurt Rothschild was an excellent academic teacher; he was extremely quick in introducing ideas from that “cutting edge” into teaching – he even wrote textbooks to make those ideas accessible to third year students. When I studied with Kurt Rothschild back in the late 70’s of the last century, we
already had a textbook (or its manuscript) on disequilibrium theory (a theory that was developed in the decade before). Even more astonishing, I find, is the fact that Kurt Rothschild published a textbook on labour economics in 1988 covering the new theories of labour markets that started entering the Mainstream around 1980. Perhaps he was so quick in that field because unemployment was indeed one of his core subjects; because in that field the need for new ideas was most urgent; because some of these new ideas correspond to what Kurt Rothschild himself has put forward himself for already some time (as Heinz Kurz points out with respect to the efficiency wage theory); and – last but not least – because those ideas have been around in the Heterodoxy for quite some time (definitely not unnoticed by Kurt Rothschild): Stiglitz (1974, 1976) published on the labour turnover model and the efficiency wage hypothesis in the context of development economics. The efficiency wage hypothesis was well around in Radical and Marxian economics (for an overview see Rebitzer, 1993); a very clear account is found in Gintis (1976, 43): “The model we have presented indicates …. that the market wage represents a minimum which will normally be exceeded. For in this situation, at the market wage, a major instrument of the employer in evincing appropriate worker behavior – the threat of dismissal – is absent. Raising the wage above the market rate, however, restores the threat of dismissal, and hence is part of a profit-maximizing strategy.”

Kurt Rothschild found his position at the “cutting edge” where mainstream and heterodox economists challenge orthodoxy. He was very quick in translating academic ideas into teaching; and he definitely contributed to educating a generation of economists sharing the view of economics as “the science of thinking in terms of models joined to the art of choosing models which are relevant to the contemporary world.”

References


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Price Theory and Oligopoly

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1. Introduction

In his seminal article, ‘Price theory and oligopoly’ (Rothschild 1947), Kurt Rothschild critically reviews recent developments in the theory of imperfect competition and puts forward several ideas on how the theory might develop in the future. Subsequent developments in the theory of imperfect competition have shown the fruitfulness of his ideas. In this paper we review these developments and discuss the correspondence to Rothschild’s original propositions. We also discuss ideas from Rothschild (1947) and his later writings that can stimulate developments in price theory in the future.

The main theoretical works discussed in Rothschild (1947) are Edward Chamberlin’s Theory of Monopolistic Competition (Chamberlin, 1932) and Joan Robinson’s Theory of Imperfect Competition (Robinson 1933). Rothschild hails these works as major advances in theory as they brought a large number of new cases into the formal theory of markets, extending the theory that had previously relied predominantly on the two polar cases of perfect competition and pure monopoly. However, he notes that while these advances allow theory to be applied to cases, such as product differentiation across firms, which had been treated as exceptions in the theory of competition and monopoly, they do not go far in dealing with interdependence of firms and the resulting indeterminateness of pricing outcomes.

Rothschild notes the hesitancy of economists to move away from theory that provides the type of determinateness for price found in the theory of competition and monopoly. He also notes that the tools available for properly examining pricing behaviour when firms are interdependent had not yet been developed. However, he suggests ‘a general approach which – while much less elegant than traditional price theory – promises a more realistic treatment of the oligopoly problem.’ (Rothschild, 1947, p. 307) He then proceeds to set out ‘some considerations to which this approach gives rise.’ (ibid)

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1 He comments perceptively on the potential to tackle these problems using the analysis presented in the book, The Theory of Games and Economic Behavior, that had just been published by Morgenstern and von Neumann (1944), even though he had to rely only on review articles to make this judgment (see Rothschild (1947, p. 306, fn. 4). The development of game theory as a framework for analysing price behaviour has been impressive. However, Rothschild (1993) points to limits to extent to which game theory has been successful in dealing with interdependence in oligopoly pricing and continues to support the pursuit of alternative approaches. Thus, game theory is only discussed peripherally in this paper.
The remainder of this paper concentrates on reviewing developments in research on oligopoly theory and related empirical research on pricing in oligopoly over the years since the publication of Rothschild (1947), focussing in particular on developments related to the considerations proposed by Rothschild. We examine, in order, research on the topics of price rigidity and other pricing practices, non-price competition and barriers to entry, internal organisation of the firm, and the political and economic power exerted by large firms. In the process, we examine later writings by Rothschild that relate to these topics. We then conclude by reviewing Rothschild’s writings for guidance on considerations that might fruitfully be explored in future research related to price theory.

2. Price rigidity and other pricing practices

Essential to the propositions in Rothschild (1947) is the notion that in oligopoly ‘a “struggle for position” is taking place side by side with an attempt to make the best of every position that is held at any special moment’ (Rothschild, 1947, p. 309-10). Also, important is the treatment of price as a dynamic phenomenon in the sense that the implications of a price at any point in time for a firm’s position relative to its current rivals, its customers and its potential rivals need to be taken into account. This leads Rothschild to conclude that, ‘Since, therefore, the quoted price is not the mechanic result of impersonal market forces nor the essential adjustment to a constantly changing environment, but the expression of a strategic policy, it is clear that there will be a tendency for its rigid maintenance.’ (Rothschild, 1947, p. 311)

Price rigidity was not a new concept in economics. As Rothschild (1947) notes, Hall and Hitch (1939) had reported findings from interviews with businessmen in which price rigidity featured as an observed phenomenon. Also, Sweezy (1939) had put forward the theoretical explanation of rigid prices based on kinked demand curves. However, rather than rely on empirical evidence as in Hall and Hitch or on a profit-maximising model as in Sweezy, Rothschild’s proposition regarding price rigidity is based on his general approach that situates oligopoly behaviour in the context of the struggle for position and making the best out of every position at any special moment.

Rothschild abandons the neoclassical approach, which is universal in the sense that it is derived from axioms, such as profit maximisation, that are meant to apply to every situation. Instead, he pursues an approach that is general in the sense of having broad applicability, but with recognition that prices are subject to other influences not incorporated within the general
The term, strategic policy, combined with the notion of struggle, reflects the environment of uncertainty in which oligopoly firms operate. Rothschild notes that oligopoly firms have a security motive as well as a profit motive (Rothschild, 1947, p. 308). Further, there is scope for judgement and for taking definite positions in the market, which would be unjustified in an environment of certainty or rational expectations. The firms make choices that are not the unique outcome of external conditions. Price rigidity is a feature of oligopoly in this sense in that changes in cost or demand conditions don’t necessarily lead to changes in price.

The mainstream of neoclassical economics has never accepted price rigidity as a pervasive characteristic of oligopoly. Both the logic and the empirical support for the proposition have been strongly attacked. One serious logical problem is that the theory is incomplete, as it explains why prices don’t change but not how the fixed price is determined (see Reid, 1981 for a full discussion). Price rigidity can at best be considered as a theory of price in the short run, a theory of price change or rather lack of price change, but it is not a theory determining the price level and certainly not a theory of price in the long run. The empirical attack has been focussed on the distinction between posted prices and transaction prices, with the latter shown to be much more flexible than the former (see Stigler and Kindahl, 1970 for evidence on this point).

Rothschild’s point is that the tendency to maintain rigid prices is a pricing practice notable specifically in the context of oligopoly, because it is when firms are engaged in the struggle for market position and aware of their interdependence that this type of behaviour makes sense. Immediately after arguing for the rigidity of quoted prices, Rothschild (1947, p. 312) adds that, ‘Oligopolistic circumstances lead to a multitude of conditions surrounding the quoted price.’ He recognizes deviations from posted prices as a common occurrence and further discusses circumstances that lead to purposeful deviation from the normal practice of maintaining fixed posted prices, including the aggressive pursuit of a stronger market position (Rothschild, 1947, pp.313-317). Thus, attacks on the theoretical and empirical validity of price rigidity do not directly address the proposition put forward by Rothschild, which is that the circumstances of oligopoly lead firms to try to maintain fixed prices as a normal business

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2 These other influences are not simply random shocks that have no systematic impact on the equilibrium outcome, as in neoclassical theory. Rather, they impact on the outcome in a systematic way, but only under special circumstances that are considered in more detailed analysis on a case-by-case basis.
practice in circumstances where profit maximisation would suggest a pattern of fluctuating prices.

Price rigidity remains controversial in economics, but its practical relevance has dissipated in an era of endemic inflation. Rigid prices are not an appropriate business practice for achieving a secure position when costs and prices of substitute products are normally rising. Rather, maintaining rigid prices would lead to steadily declining profit margins under such circumstances, which would undermine the financial stability of the firm. Thus, alternative pricing practices are required for oligopoly under inflationary conditions. This is fully consistent with Rothschild’s general theory of pricing in oligopoly.

An alternative pricing principle discussed briefly in Rothschild (1947) is full-cost pricing of the type identified by Hall and Hitch (1939) in their interviews with businessmen. Rothschild suggests that this type of pricing is a

‘perfectly logical outcome of the market situation with which they were primarily concerned – monopolistic competition with an admixture of oligopoly’ as alternative pricing practices... When, however, the position of the oligopolists or duopolists is more powerful and not easily invaded they will not keep to the full-cost principle, but will add varying and "abnormal" profit percentages to their costs in proportion to their assumed strength, or they will fix prices without reference to costs altogether.’ (Rothschild, 1947, pp.311)

The general form of pricing practice covered by this passage is mark-up pricing, prices that are set by adding a percentage profit margin to some measure of unit cost.

Mark-up pricing satisfies the basic requirements of Rothschild’s general theory of pricing in oligopoly in that it is a practice that allows firms to maintain a degree of stability in the struggle for position while doing the best they can at any special moment. When all firms in an industry follow mark-up pricing rules and face similar inflationary cost increases, their relative position in price can be maintained and the threat of price wars minimised. This is the scenario discussed by Rothschild (1993) in a comparison of a Stackleberg model of oligopoly with a model that he labels the “Sylos approach” in that it is based on the work of Sylos-Labini (1969, 1979 and 1987). Rothschild (1993, p.169) concludes the comparison by stating that, ‘Openness of approach can be important. From this point of view case studies, numerical and graphical exercises, and so on, have a role to play in addition to or in place more “exact” but less open analytical methods – more so in the sphere of oligopoly than in other branches of price and market structure theory.’
Variants of mark-up pricing are dominant in the post-Keynesian theory of pricing (see Lee, 1998). Applying mark-up pricing to the manufacturing sector of economy, which is generally characterized by oligopoly, provides a powerful tool in analysing aggregate economic activity. In particular, Kalecki (1971) shows how the distribution of income in the economy evolves over the business cycle by combining mark-up pricing in oligopoly with competitive pricing in primary production. Similar models are widely applied by other authors for analysing many aspects of income distribution and inflation. Indeed, Rothschild (1972) in his analysis of pricing in an inflationary environment directly applies a variant of mark-up pricing.

As with price rigidity, mark-up pricing is not a complete theory of pricing. It is a theory of price change, but not the price level. In particular, in the context of oligopoly an explanation of the size of the mark-up is required to complete the link between the cost level and the price level. Rothschild (1947) considers factors affecting the gap between cost and price in only a general way, but there is substantial analysis of these factors in the post-Keynesian literature cited above.

3. Non-price competition and barriers to entry

Rothschild (1947) makes scant mention of non-price competition and does not deal directly with issue of barriers to entry aside from a very perceptive comment on the endogeneity of market structure that is discussed below. Rothschild’s article was written before the seminal contributions of Bain (1956) and Sylos-Labini (1969), which introduced the threat of entry as a main consideration in the pricing behaviour of oligopoly. This section discusses these contributions and subsequent developments in the analysis of non-price competition and barriers to entry so as to assess the implications for price theory.

The most direct implication for price theory of non-price competition and barriers to entry is in the entry-limiting-price model as discussed in the seminal works of Bain (1956) and Sylos-Labini (1969) (the Italian original of 1956 is exposited in Modigliani. 1958), which identifies

3 See, for example, applications to the analysis of inflation in Beckerman and Jenkinson (1986) and Bloch, et al (2004).

4 In Rothschild (1972) prices rise by a fixed proportion of unit costs plus a percentage that depends on the phase of the business cycle. This ignores the role of raw material costs and results in a percentage profit margin that varies over the business cycle, but roughly captures the spirit of cost-plus pricing rules.
a maximum price by incumbents to deter entry of new competitors. Spence (1977) reassesses this model in emphasising early capital accumulation helping incumbents to build large capacity and to make plausible the threat to lower price after entry. Caves and Porter (1977, p.261) generalise this approach stating, ‘as an investment decision made under uncertainty and conjectural interdependence, and by recognizing that subgroup structures of industries impede intra-industry mobility, we have sought to generalize the theory of barriers to entry into a theory of mobility barriers that takes a consistent and comprehensive view of the decision-making behaviour of both nascent and going firms.’

The work of Spence (1977) and Caves and Porter (1977) raise doubt on the ability of incumbents to use the threat of lower prices after entry as an effective deterrent to potential entrants. These doubts are amplified in the application of game theory to the investment decisions of incumbents and entrants by Dixit (1979 and 1980). Milgrom and Roberts (1982) further develop this line of inquiry by assuming asymmetry of information between the incumbent and the entrant may happen, where low demand or low marginal cost is signalled by the incumbent to limit entry by the entrant. Under conditions of full information and complete markets, Baumol, Panzar and Willig (1982, p.82) consider high sunk cost in defining an entry barrier in a contestable market as ‘anything that requires an expenditure by a new entrant into an industry, but imposes no equivalent cost upon an incumbent’. At this point, the idea that incumbents can use low prices to deter entry disappears completely from the horizon.

Much of the early research on entry barriers is based on the structure-conduct-performance paradigm, which ignores the dynamics of industry adjustment. In this paradigm, the number and size distribution of firms in an industry (as measured, for example, in a concentration ratio) determine profitability. Essentially, it is high entry barriers, rather than firm price or non-price behaviour, which result in highly concentrated industries and allow firms in these industries to persist in earning higher profits in without eroding their position.5

This view of exogenously determined market structure is challenged by Rothschild (1947) in another of his prescient commentaries of the state of existing theory. Rothschild notes,

‘these theories are all based on the assumption that the oligopolists - while recognising that their price activities will call forth reactions from their rivals -

acquiesce in the permanent nature of the industry's structure. But since it is
doubtless one of the distinguishing characteristics of duopoly and oligopoly
that the rival firms can actively influence and change the market situation, these
theories, too, fail to provide a theoretical framework for the interpretation of
reality.’ (Rothschild, 1947, pp. 303)

Some fifty years later, Sutton (1991, 1998) addresses this issue in an application of game
theory to the conceptual inadequacies of the structure-conduct performance paradigm. Sutton
argues that a definitive inverse relation is expected between concentration and market size as
a barrier to entry, only as long as set-up costs for the industry are exogenously determined.
Large markets are possible with a few large firms instead of a large number of firms as long
as the few firms have available a strategy of high expenditures on items that enhance their
market position, such as advertising and research and development, provided those
expenditures have no market value outside of current operations (they are “sunk costs”).
Sutton (1991) tests this hypothesis with twenty narrowly defined food and drink industries
across six developed countries. Further evidence in support of Sutton’s proposition is
provided by Robinson and Chang (1996) for a cross-section of US consumer and industrial
goods manufacturing and by Bhattacharya and Bloch (2000) for a cross-section of Australian
manufacturing industries.

In Sutton’s analysis, pricing does not play a role in the long-run steady-state structure of an
industry. However, a potential role emerges in considering the process of adjustment to the
steady state. Empirical studies of the adjustment of industrial concentration towards a steady
state generally find that adjustment is very slow, approaching steady state at rates of no more
than a few percentage points a year. High prices might speed or slow the adjustment process
by affecting the timing of the investment decisions of either incumbent firms or potential
entrants, for example by providing more internal finance for incumbents or reducing the risk
of short-run losses for entrants. However, there is no clear evidence of a strong impact of
profitability on the speed of adjustment.⁶

In recent decades, the structure of many industries has changed substantially, particularly due
to the globalization, liberalization and privatization across industries and countries.
Transnational corporations are increasingly expanding boundaries along with local firms. The
whole process opens up both opportunities and threats to the industries. The role of entry

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⁶ See Bhattacharya and Bloch (2000) for some estimates for a cross-section of Australian
manufacturing industries and for a review of earlier studies on the speed of adjustment.
barriers has evolved from the era of Bain and Sylos-Labini to that of Sutton’s research. The importance of non-price competition strategies (research and development, advertising, variety of products, product quality, etc) has increased over time in explaining competition within modern industries as compared to pricing strategies. The exact calculation of price associated with entry-limiting pricing has been generally abandoned in theoretical models, but a general proposition that entry barriers do lead to higher prices relative to unit production costs remains (especially when the “sunk costs” associated with building barriers to entry are excluded from production costs). This proposition fits well with Rothschild’s general theory of pricing in oligopoly, where barriers to entry are taken to be one of the other factors that must be kept in mind when considering pricing practices in oligopoly.

4. Internal organization

The growing scale and scope of firms had progressed sufficiently to be noted in Rothschild (1947) and is later discussed by Rothschild in relation to the power of transnational corporations (see the next section below). Large diversified firms develop complex internal structures to be able to manage their extensive and diverse operations. This complexity in turn influences decision making in the firm, including their pricing practices. (Rothschild, 1947, p. 313) notes the implications for pricing theory, stating that ‘Prices are therefore increasingly the outcome of the different pulls of the conflicting interests of various departments.’ This idea has not been directly developed further in subsequent literature, but there has been substantial development of the theory of organisation within the firm. At least some of this literature has implications for the strategies adopted by firms, including the way in which they compete in price and non-price dimensions. This section is devoted to discussing this literature and its implications for pricing theory in oligopoly.

Penrose (1959) provides a seminal contribution to the theory of organisation of the modern firm. Penrose argues that with modern forms of internal organisation there is no constraint on the size of firms. Large size brings with it the advantages of productivity gains from the division of labour, with large firms able to take advantage of the highly specialised skills and knowledge of individual workers. However, specialisation of knowledge implies a lack of shared knowledge, which contributes to the conflicts of interest noted by Rothschild and the

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7 For example, using data for 46 major product innovations, Agarwal and Gort (2001) find that the average duration of between the commercial introduction of a new product and its imitation by competitors declined from 33 years at the beginning of the century to 3.4 years for the two decades, 1967 to 1986.
consequent need for mechanisms for coordination and the managing of conflict. Further, the need to share knowledge implies that the growth rate of a firm is constrained by the diversion of managerial effort to train and integrate new managers as the scale and scope of the firm expands.

Innovation is a key requirement for success in the modern large firm, which means the continual introduction of new knowledge to the firm. This adds to the complexity of the modern firm as discussed by Bloch and Metcalfe (2011). Therein, it is noted that such complexity contributes to the adoption of simplified rules and routines as mechanisms for decision making, providing a further rationale for the prevalence of rule-based pricing practices, such as maintaining rigid prices or basing prices on fixed mark ups over unit cost. Modern firms have to deal with complexity from within as well as interdependence from without.

It is interesting to compare the complexity view of the firm with the developments in mainstream analysis of the organisation of the firm. Here, the main focus in answering why firms exist and what determines their boundaries in terms of size and scope has been on transactions costs. Following Coase (1937), the basic mainstream argument has been that firms exist to economise on costs that would otherwise be incurred in organising transactions among independent workers, suppliers of materials and owners of capital equipment. Likewise, firm boundaries are determined to minimise the sum of transaction costs across all firms. This approach fits neatly with the axiomatic approach to production and consumption of neoclassical economics, but presumes a well informed process operating both within firms and across markets. Rothschild’s continual warnings about the dangers of pursuing theoretical elegance at the expense of relevance are particularly appropriate here.

In practice, firm boundaries are blurred in modern industrial world. For example, compare the Japanese form of industry organisation with strong inter-firm relationships to fiercely independent European and American firms. The former have cooperated effectively to enhance their competitiveness in the world market since World War II (Caves and Uekusa, 1976). This provides an illustration of how firm boundaries (level of integration), the structure of financial markets (in raising capital and develop innovative activities), formal (inter-firm agreements and complementary capabilities) and informal organisational structure (culture of workforce, managerial complexity) and historical path dependence are significant in determining competitive strategies of transnational firms.

Case studies provide insight into the extent to which competitive strategy is influenced by internal structure. A powerful illustration is provided by Chandler (1990), particularly
focussing on the role of investment within organisations in building modern capitalism. In a review, Teece (1993, p.200) suggests ‘Chandler has grasped some fundamental facets of enterprise performance largely neglected by economic theory –facets which must come into shape focus if economists are to understand the new forms of business organizations, financial institutions, governance systems, and policies needed to develop and exploit the wave of new industrial technologies which are upon us.” Modern firms are based on a variety of organisational mechanisms in determining cost and pricing structure.

Teece, et al (1994) develop the concept of ‘coherence’ of the multiproduct business firm. Enterprise learning, path dependencies and nature of selection environment are found to be significant in determining diversity amongst modern firms. The influence of the selection environment in determining the outcomes of strategy, particularly innovation strategy, is explored in detail by Nelson and Winter (1982) in their evolutionary approach to firm and organisational behaviour.

5. Power

Rothschild (1947) emphasizes that oligopoly raises concerns for power well beyond influence in the marketplace. In particular, the large amounts spent on lobbying by large oligopoly firms are noted as playing a role in shaping the firms’ position comparable to the role played by amounts spent on advertising. Rothschild puts forward the proposition that,

‘The oligopolistic struggle for position and security includes political action of all sorts right up to imperialism. The inclusion of these "non-economic" elements is essential for a full explanation of oligopoly behaviour and price.’

(Rothschild, 1947, p. 317, italics in original)

The importance of power in pricing theory and other areas of economics is a theme that continually appears in Rothschild’s writings. He devotes one of his last articles, Rothschild (2002), to a detailed critique of neoclassical economics for its failure to include the consideration of power. Here, he notes that, ‘The neglect of power in mainstream economics has its main roots rather in deliberate strategies to remove power questions to a subordinate position for inner-theoretical reasons.’ (Rothschild, 2002, p. 437) These inner-theoretical reasons are partly methodological, particularly the desire to maintain an axiom-based theory that provides exact results and thereby avoids fuzzy notions embraced by other social sciences, and partly ideological, especially the pursuit of favour from powerful interests within society who benefit from the laissez-faire implications of neoclassical economics.
A specific concern related to the use of power by oligopoly firms in their modern guise of transnational corporations is taken up in Rothschild (2005). Here, transnational firms are noted as using their power of location of activity to enhance their position relative to parties that are unable to migrate, particularly small businesses and labour as well as national and local governments. The result is higher profits for the transnationals through reduced input prices and production costs. In terms of pricing for outputs not much is expected to change. Rothschild states that, ‘Competition within the transnational sector will continue to run according to existing theories of price and output determination.’ (Rothschild, 2005, p. 446, italics in original)

As Rothschild maintained a stream of commentary on the treatment, or rather neglect, of power in economic analysis, we do not comment further on the literature. However, events of recent years provide compelling examples of the use of state power to the advantage of large firms, particularly in the financial sector. The use of public funds to prop up large banks and other financial firms has nearly bankrupted several economies (and may yet do so), while others in society have had to deal with the impact of severe austerity programs. Mainstream economists have been quick to defend the interventions as necessary to maintaining the integrity of the international financial system and avoiding a banking panic. However, they have not been so quick to provide a compelling theory of why governments allowed banks to become “too big to fail” or become so highly leveraged that they were unable to survive a large shock of their own creation. More directly of concern to price theory is the pressure being applied to governments to find ways of driving down domestic wages, at the same time as propping up prices by protecting domestic producers, including domestic subsidiaries of transnational corporations, from foreign competition, including through the use of tariffs and non-tariff trade barriers.

6. Ideas for the next generation

Rothschild’s (1947) seminal paper on price and oligopoly aimed to provide guidance to subsequent researchers and he clearly did that with at least some of his propositions and discussion. Price theory has developed in a number of different dimensions to deal with his main insight that oligopoly is a struggle for position, requiring an analysis that is much more than the application of an elegant profit-maximising calculus. Rothschild was consistent throughout his life in arguing for an open and realistic approach to economic theorizing, including price theory. As detailed above, there has been considerable progress of this sort in price theory through developments in rule-based pricing practices, such as mark-up pricing, endogenous market structure, the analysis of the impact of internal firm organisation on
strategic policy and the use (and abuse) or both market and political power by oligopoly firms. However, much remains to be done along lines suggested by Rothschild in his time.

Power remains a key element of the economy that requires further examination. As noted immediately above, the exercise of state power to promote private interests is prominent in the factors leading up to and following the global financial crisis. Economists from Adam Smith onward have been strong critics of state power being used to pursue private interest and have even provided a theory of public choice based on the axioms of private optimization. However, the policy prescriptions from the mainstream for dealing with the problem fail to go beyond advocating laissez faire. As Rothschild notes, these policy prescriptions are long standing and flawed,

‘The trouble began … by concentrating many of its analyses on the actions of single self-interested individuals in a competitive world. While competition certainly still exists, the individual behavior and the extent and type of competition have dramatically changed since Smith’s days and these changes suggest very clearly that today it might be—more than ever—a big mistake to regard the power problem as a quantité negligable.’ (Rothschild, 2002, p.436)

Power affects pricing directly through various state interventions into the market, including price controls, subsidies, taxes, tariffs and other restraints on trade. Power also affects pricing indirectly through the regulation of market structure, industrial relations, consumer protection and environmental controls, as well as a host of other legislative, regulatory and judicial interventions. More generally, power influences the whole structure of society and the course of development through time, including the provision of education, the development of technology, the degree of inequality in income and the extent of economic and political freedom for individuals. Rothschild was clearly on the mark arguing that this is a core issue for economics rather than a quantité negligible.

The internal organisation of firms remains a fertile ground for further development of price theory. Rothschild (1947) noted conflicts of interest within the firm as being one possible influence on pricing. As noted above, the complexity of the modern firm contributes to the adoption of rules and routines, including rule-based pricing practices such as mark-up pricing. More generally, coordinating the specialised knowledge within a firm, and managing the conflicts that arise, impacts on the type of competitive strategies adopted by a firm. The link between internal organisation and competitive strategy remains to be fully explored.
In spite of the voluminous literature on the subject appearing since the middle of the last century, the dilemma for pricing theory in oligopoly today is not much different than the way it was described in Rothschild (1947). There are analytical models based on axioms, such as profit maximisation, yielding exact results but only under very narrow conditions that avoid the general indeterminateness of price in oligopoly. There are also general theories that emphasise the struggle for position in oligopoly and capture features of pricing that result, such as price rigidity and mark-up pricing. Neither approach is fully satisfactory in terms of rigour, realism and usefulness for economic modelling. Rothschild’s consistent argument in favour of openness in dealing with this dilemma is still relevant and helpful as are the closing sentences of his 1947 article,

‘But the undiscovered territory must be entered by economic theory if it is not to lose all touch with reality. The tentative first step outlined in the previous section certainly looks very crude and pedestrian when compared with the polished elegance of modern value theory. But it is tentative steps of this sort which economic analysis must undertake to-day.’ (Rothschild, 1947, p.320)

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Discussant: Michael Landesmann*

Kurt Rothschild’s

‘Price Theory and Oligopoly’ Revisited

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Kurt Rothschild published one of his best-known articles ‘Price Theory and Oligopoly’ in 1947 (Economic Journal, pp. 299-320) when he was lecturer at the University of Glasgow. The article should be seen in the context of the appearance of a number of important contributions over the 1930s and 1940s on the economics of Imperfect Competition, most notably the contributions of Joan Robinson (1933), Chamberlin (1933) and also the launch of game theory by John von Neumann and Oscar Morgenstern (1944).

Kurt Rothschild wanted to differentiate his own stance on the analysis of imperfect competition from these contributions and from the earlier approaches taken by traditional price theory which examined only the polar cases of perfect competition and monopoly. He criticised traditional price theory but also the contributions by Robinson and Chamberlin in that it “…badly neglects the case where a small number of powerful firms compete with each other, the action of each exerting a marked influence on the position of all the others, and each of them not only adjusting itself passively to a ‘given’ market situation, but capable of actively changing that market situation.” (Ibid p. 302)

In his discourse Kurt Rothschild starts with a methodological point: that economic theory which addresses imperfect competition tries to be too ambitious to find a determinate solution for prices set in given market structures. In order to arrive at such determinate solutions, the theoreticians make too many restrictive assumptions, constraining the degrees of freedom of firm behaviour, thus losing sight of essential elements of actual behaviour in oligopolistic or duopoly settings. This is the setting which Rothschild sees as “the most typical case in industry” (Ibid p. 302). Kurt Rothschild attempts in this article to widen the analysis of economic behaviour in such settings, singling out qualitative aspects of such behaviour not emphasised in the literature so far without however deriving exact, quantitative solutions.

There are two features in particular which Rothschild emphasises and which characterise strategic behaviour in oligopolistic settings: one is the importance of ‘uncertainty’ which implies “… that the vague knowledge a firm possesses of its demand and cost schedules cannot extend far into the future” (Ibid, p. 3081); the other one, linked to the first, is the distinction between a ‘security’ motive and a ‘profit’ motive. It is precisely the level of uncertainty in the context of competition ‘amongst the few’ when market structures can

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1 Rothschild continues: “Any theory, therefore, which tries to explain price behaviour in terms of marginal curves derived from long-term demand and cost curves really bypasses the problem of uncertainty and thus the very factor which gives rise to that desire for security which the theory tries to explain.” (Ibid)
change, when demand and supply shocks can affect the evaluation of longer-term demand and cost conditions of individual firms that make the ‘security’ motive an important one to describe ‘oligopolists’ behaviour.

In quite a few instances, Rothschild argues, a distinction between a ‘long-run profits’ motive and the security motive does not lead to different predictions of behaviour. However, in other instances – Rothschild claims – this would not be the case. Rothschild singles out three types of behaviour which makes behaviour based on the security motive different from that based on simple profit maximisation: one instance – Rothschild claims - is that profit maximisation would lead to continuous price responses in the face of ‘shocks’ to revenue and cost conditions while the security motive would likely lead to maintaining in many circumstances rigid prices. We shall return to Rothschild’s – not very satisfactory – argument in favour of this observation. The second example of differences in behaviour guided by the security motive vs. profit maximisation is that the security motive is likely to lead to ‘oversized firms’ while profit maximisation would suggest an ‘optimal size’ from a cost point of view. The third example he gives is that the security motive would lead firms to plough back most ‘reserve funds’ back into their own firm while profit maximisation would suggest investments into whatever areas promise highest expected returns.

Let us examine shortly Rothschild’s arguments in favour of these three observations linked to his strong belief that behaviour in oligopolistic markets is in many instances guided by a ‘security motive’ more than a traditional ‘profit motive’. The issue of ‘rigid prices’: here Rothschild makes an argument which is not unlike Paul Sweezy’s ‘kinked demand curve’ analysis published in a well-known article in 1939 (Sweezy, 1939) and which is strangely not referred to by Rothschild: “A price will have to be quoted that will allow the oligopolist to hold his own both vis-à-vis existing and potential rivals and vis-à-vis the consumers. This means that in ‘normal’ periods the price must not be so low that it provokes retaliations from the competitors, nor so high that it encourages new entrants, and it must be within the range which will maintain the goodwill of the customers – i.e. will maintain a protection against aggressive policies of the rivals.” (Ibid pp. 310-11). The main motivation of the oligopolist in such circumstances is – according to Rothschild – to ‘entrench’ themselves in their market position and “...should an opportunity arise – to launch an offensive into rival territory.”

Pricing is thus a tool in the strategic behaviour of oligopolists, considering their market positions as their main targets while market positions in turn also determine the degrees of freedom an oligopolist has to pursue strategic actions. While not very stringently argued, Rothschild concludes that his approach will lead to a preference of ‘rigid prices’ in normal times (which can extend for long stretches of time). However such periods can be interrupted
by episodes in which ‘wars’ (these can be fought as ‘price wars’ but also employ a range of other ‘weapons’\(^2\) such as aggressive advertising, product quality, credit and discount arrangements, etc.) open the prospects of changes in market positions. Shifts in market positions can occur because of external factors which affect all market participants such as a strong change in the level of market demand (although here he argues that in periods of depressions, oligopolists are more inclined towards price-fixing agreements) or when an industry undergoes strong bouts of technical progress. Rothschild argues that the impulse to take advantage of changing market positions to one’s advantage is particularly strong in ‘new and expanding industries’ where “... it is not a question of invading a rival’s territory, but of rushing into new, unoccupied territory before the others have taken possession of it. ... the price pattern for such new, expanding industries is ... one of strong price competition, followed by a rigid price policy after the new territory has been divided up and further expansion would involve an attack on rival strongholds.”(Ibid, p. 314). Apart from ‘external reasons’ (industry-wide shifts in demand and/or technical progress) there is always the (‘internal’) motivation present to improve a particular firm’s position at the expense of a rival. However, given “the cost of such a struggle, the uncertainty of its outcome, and the harmful effects it may have on other aspects of the security drive (e.g. public opinion), will make the outbreak of hostilities the exception rather than the rule”. (Ibid, p. 315)

The struggle for maintaining or widening an oligopolist’s market position also leads to the other features mentioned earlier, the tendency towards ‘oversized firms’ which could not be justified from a pure cost-based approach towards an ‘optimum size of the firm’ and also the tendency towards a high share of reinvestment of profits into one’s own firm rather than searching for highest yields obtainable across all asset holdings. As pointed out in the later literature on investment in oligopolistic markets (see e.g. Dixit 1980), excess capacities can serve as entry-deterrence, and similarly – as Rothschild emphasises - merger and acquisition activity, reliance on financial strength, inter-locking directorates, attempts towards vertical integration to secure vital energy and input supplies, pre-emptive advertising campaigns, etc. can all contribute to strengthening a firm’s position either vis-à-vis existing rivals or vis-à-vis potential new entrants. These are now all well-confirmed features of strategic behaviour in imperfectly competitive market situations, both in theoretical contributions as well as in empirical research (see e.g. Dixit and Pindyck, 1994, Schmalensee, 1972).

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\(^2\) Kurt Rothschild throughout his article prefers the language of Clausewitz (‘Principles of War’) to that of either game theory or to biological or psychological terms to characterise the behaviour of oligopolists (see pp. 305-07). This is also linked to Rothschild’s life-long interest in the role of power in economics; see his well known Penguin volume (Rothschild, 1971).
There are two further features which should be mentioned with regard to Rothschild’s rich analysis of oligopolistic behaviour in this paper: one is the recognition that firms – especially above a certain size – should be considered complex organisational entities with different departments which are at times articulating conflicting interests (“Prices are therefore increasingly the outcome of the different pulls of the conflicting interests of various departments”; Ibid, p. 313); the other is a hallmark of Rothschild’s analysis which he continued to pursue throughout his life: that strategies by powerful economic actors do not just take place in the narrow economic sphere (“the market place”) but involve political action of one type or another as evidenced e.g. by huge expenditures on lobbying. The substantive part of the article thus ends with a rather powerful statement which we would hardly be able to find in today’s economic journals:

“The oligopolistic struggle for position and security includes political action of all sorts right up to imperialism. The inclusion of these ‘non-economic’ elements is essential for a full explanation of oligopolistic behaviour and price.” (Ibid. P. 319).

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Jürgen Kromphardt*

Labour Market Theory, Wage and Price Dynamics, Theory of Growth

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When I was asked to make a contribution in the honour of Kurt Rothschild I did not hesitate to accept the invitation. While doing so I underestimated the number of contributions Rothschild had published in English in the three fields which were entrusted to use, namely:

- labour market theory
- wage and price dynamics
- theory of growth

Since the conference considers the contributions of Rothschild on the international stage, I concentrate this report on his publications available in English.

Fortunately I found in the literature the article “Kurt Rothschild and the Alternative Austrian economics”, written by John King in the Festschrift honouring the 80th anniversary of Rothschild and edited by Egon Matzner and Ewald Nowotny in 1994. This overview was a helpful guide for me. My thanks go to him.

I. Labour Market Theory

Since his beginning, Rothschild refused to restrain his analysis of the labour market to the hypothesis that perfect competition dominates even the labour markets. Consequently Rothschild's first article in this field on “Monopsony, Buying Costs and Welfare Expenditures” (Rothschild (1942/43) dealt with the consequences of monopsony on the labour market. He analyzed a firm which is the only buyer of labour of a certain type in a region and asked whether it is useful for it to spend money to inform potential workers about its qualities as employer. Such job advertising increases the elasticity of supply by ameliorating workers’ information. According to Rothschild, these expenditures “will reduce monopsonistic exploitation and will almost invariably lead to an increase in employment.” (p. 64)

Market imperfections are also present in Rothschild (1945) paper on “Wages and Risk Bearing”. There, Rothschild expresses once again his doubts about the smooth functioning of the neoclassical model. He shows that – contrary to neoclassical assumptions – the risks a worker is exposed to are not compensated by a premium above the wage rate. He assembles indicators for three occupational risks (occupational mortality, wage volatility, risk of unemployment) and shows for 29 occupations by a simple correlation between their weekly wage earnings and their exposure to each of these risks that these risks are not rewarded. On the contrary the correlation coefficients are negative!
Rothschild then discusses some possible explanations for the workers’ acceptance of jobs with high risks:

“They consist partly of the ignorance of the workers as to the facts about risk, but the main factor is probably the impossibility for workers to move from one occupation to the other, because they lack financial and other opportunities to do so and stand under continuous pressure to take up work quickly without waiting and weighing alternative possibilities.” (p. 197)

On the basis of his intensive occupation with the determination of real wages, Rothschild published his “Theory of Wages” (1954). This book emanated out of the lectures delivered by Rothschild at the University of Glasgow. The book consists - after a short introduction giving an overview of the “classical” wage theories – of four parts. The first and the second are concerned with the determination of the wage level, separated into “wages under perfect competition”, determined by demand and supply of labour, and “Wages in the actual world”.

In chapter III of the first part, Rothschild discusses the consequences of a change in the wage rate on the supply of labour. For obvious reasons Rothschild concluded “that the short-term supply of labour tends to be inelastic and responds only slowly to changes in wages (p. 40). But also in the long run two effects pull in opposite directions:

“On the one hand a higher wage will mean to the worker a greater reward for his efforts, and that may induce him to work more than he thought worth while at the old rate. On the other hand, with a higher wage-rate the worker will be able to obtain his previous real income in a shorter time (or with a smaller effort), and he may prefer to take part of his increase in the standard of living in the form of leisure rather than additional income. This would mean that he would work less than at the old, lower wage. The combined effect of these two forces, then, will decide whether a rise in the wage-rate will induce the worker to increase or decrease his labour supply.” (p. 40/41)

The demand for labour is discussed “under perfect competition” (part B) and in the actual world (part C). In Part B, Rothschild discusses critically in the chapter on the demand for labour the theorem that wages equal the marginal productivity of labour and asks, whether the microeconomic analysis can be applied to labour as a whole. His answer is:

“When all wages are altered this is no longer true. The changes in money wages will have an appreciable effect on the price level. Until we have
investigated more fully the nature of these repercussions (see chapter XI), we shall not be able to estimate the effect of general change in money wages on real wages and employment.\(^\text{“}\) (1954, p. 26)

It is only in the part “Wages in the actual world” that Rothschild turns to the arguments given by Keynes in chapter 19 of his General Theory (1936). He reaches the following conclusion about the consequences of a reduction of the wage level:

“the usual course will be a slow dragging down of wages, causing losses all along its course, raising expectations of further declines, and thus leading to a cumulative downward movement of wages, prices, investment, employment and the national income. The growth in the rigidity of money wages is, therefore, not in general, as has often been alleged, a major cause of unemployment, but, on the contrary, an important stabilizer in a world which otherwise might experience violent fluctuations in prices and incomes and all the uncertainty that goes with them.\(^\text{“}\) (1954, p. 155)

This statement corresponds fully to Keynes’ ideas. Perhaps it would have been useful – especially in a text book – to express these findings about the supply and the demand on the labour market graphically to underline the opposition to the neoclassical interpretation.

\[\text{Stylized Neoclassical Labour Market} \quad \text{Stylized Labour Market of Keynes}\]

1 This presentation avoids the trap that the “totem of the macros” looks exactly like the well known “totem of the micros” which forms the basis of the neoclassical theory (see for this allusion the wonderful article of Leijonhufvud (1981) about “Life among the Econ”).
According to the arguments of Rothschild, both sides – Demand and Supply – show no clear and predictable reactions to changes in the real wage level. Therefore it is possible to have two curves which do not intersect! In that case equilibrium can only be reached if the demand curve is shifted to the right or the supply curve to the left.

For a labour market dominated by collective bargaining, Carlin/Soskice (1990) developed their labour market model which consists of a wage-setting and a price-setting curve and which is often called a “reference model” (e.g. Bean, 1994 and Franz, 1996) (see for an integration of the labour market of Keynes into the model of Carlin/Soskice (1990) the article by Kromphardt/Schneider (2007)).

Finally, in part C, Rothschild considers the prevalence of monopolistic and monopsonistic conditions which open a field for wage bargaining by trade unions and employers associations.

The much shorter part D discusses very shortly the problems of minimum wage and of the labourers share in national income. The last item does not concern my contribution, but with respect to minimum wages two remarks are in order:

a) With respect to a minimum wage for specific branches of industry Rothschild states:

“If the minimum wage is at all effective, i.e., if it does not lie below the wages actually paid, its immediate effect will be a decline in the demand for this type of labour. But this may only be temporary. If the labour market is monopsonistic, the minimum wage may simply put an end to monopsonistic exploitation without affecting employment at all. In other cases the ‘economy of high wages’ may be set in motion so that the shock of the wage increase leads to higher productivity, the instalment of better equipment, and ultimately, perhaps to a return to the original employment level.“ (1954, p. 150)

b) According to Rothschild (see 1954, p. 151 ff.), it is very difficult to determine the optimal minimum wage on the national level. Two factors have to be taken into account: The standard of living and the capacity of industry to pay. It is remarkable that Rothschild does not use any macroeconomic argument relating to the enhanced income of those workers who are not immediately thrown out of their job.

The publications of Rothschild made strong impression in the field of labour market research. Thus, Rothschild was invited by John Dunlop to participate in a conference organized by the
“International Economic Association” on the topic “The Theory of Wage Determination” and to deliver a paper on the “Approaches to the Theory of Bargaining”.

Rothschild was one of only two economists from German speaking countries to contribute a paper – the other one was Wilhelm Krelle.

In his contribution (published three years later by Dunlop (1957) in the conference volume “The Theory of Wage Determination”, Rothschild starts with an explanation, why the leading theories of the 19th century had no place for bargaining:

“It was comparatively easy to exclude bargaining from the leading nineteenth-century wage theories, or at least to show that it must be a futile undertaking. For all these theories relied on rigidly determined supply or demand conditions from which there was no escape:

- The Iron Law of Wages, by postulating a perfectly elastic supply of labour (in the long run) at the subsistence wage, could easily show that every wage advantage gained would soon be translated into more labourers competing for work and reducing wages to their old level.

- The wage fund theory in its various forms could dispose with equal ease all claims that bargaining could lead to an all-round improvement in labour’s income: With a fixed stock of capital available for wage payments every improvement in one direction would be fully compensated by a deterioration in another direction.

- Finally, the marginal productivity theory, by taking perfect competition and the supply of the various factors of production as given, could construct an employers’ demand curve and determine an ‘equilibrium wage’, any diversion from which would lead to unemployment or labour shortages, which in turn would press the wage back to its equilibrium level.” (1957, p. 282)

Rothschild found it more astonishing and more open to critique that even later mainstream economists took the same position:

“While unemployed families were suffering severe hardships and trade unionists were risking their lives to secure collective bargaining rights, unemployment was regarded by many writers as practically non-existent and bargaining itself as an empty illusion.” (1957, p. 281)

For Rothschild, “it is not difficult to find the reasons for this astounding one-sidedness, if not to say blindness in many post-Ricardian economic treatises. Two strong motives (not necessarily conscious) combined to produce this result: the desire to preserve a neat
theoretical structure, unblurred by such disequilibrating forces as unemployment and bargaining, and the wish to defend the capitalist system – at least in its pure, theoretical form – against criticisms from the growing socialist movement.” (1957, p. 281)

Rothschild then distinguishes two approaches to the theory of bargaining:

- bargaining and imperfect competition theory
- ‘psychological’ and ‘institutional’ theories

The first approach elucidates the “scope for bargaining within the framework of marginal productivity theory. This is done by dropping some of the simplifying assumptions” (1957, p. 283). E.g. the assumption of a static marginal productivity should be dropped because a higher bargained wage “may increase the productivity of the workers, it may force the capitalists to improve the efficiency of the production process” (1957, p. 284). Beyond that imperfect competition in the labour market (monopsony) and the goods market may give room for bargaining.

Nevertheless Rothschild was rather sceptical with respect to the overall explanatory power of this approach:

“All the various facets of the bargaining problem advanced in this group do not add up to a bargaining theory. They do not show whether bargaining takes place or how it is done. They rather represent an attempt to rid the marginal productivity approach of some of its assumptions which made it incompatible with the idea of successful bargaining. This in itself has been an important step. But it remains to be seen whether a conclusive theory of modern wage determination and wage bargaining can be constructed along these in the last resort traditional lines, or whether a different approach would be more fruitful.” (1957, p. 285/6)

The second approach is described by Rothschild as follows:

“From rather a different angle comes the other group of theories – predominantly American – which also accord to bargaining a central place in their theory, but are concerned specifically with the labour field and with the institutions observed there. These theories, in all their variety we may call institutional theories, in contrast to the ‘psychological’ theories mentioned before. … we can distinguish two very different origins from which stem these new approaches to bargaining. On the one hand we have the interest in the theory of duopoly, bilateral monopoly, oligopoly, coupled with a recognition that questions of strategy, uncertainty, bluff, and so on, cannot be regarded as exogenous forces, but must on the contrary be treated as decisive causal factors.” (1957, p. 286 f.)
The positive side of these theories is seen by Rothschild in the fact, that “they take bargaining as their starting-point, or at least introduce it at an early stage, rather than ‘explain it’ into a theoretical structure hostile to bargaining.” (1957, p. 287) But Rothschild is not content with the state of these approaches and he believes that “progress must be in finding some bridge between the ‘psychological’ and the ‘institutional’ theories. (p. 287)

Rothschild had become very well known in the field of wage theory. So, two chapters of this textbook on wage theory were reproduced in the “Readings of Labour Market Analysis”, edited by Flanagan and others (see Burton et al., 1971). For the readings were chosen the chapters:

- The demand of labour under perfect competition
- Monopsonistic conditions

More articles became available at the international (i.e. English speaking) stage when (in 1993), Rothschild published 22 of his essays at Routledge under the title “Employment, Wages and Income Distribution”. Half of them appeared in English for the first time. It was only then, that the international stage had the possibility to get easily informed about some very interesting contributions to my subjects.

Since I cannot mention them all, I concentrate in this section on two articles which are to my opinion the most interesting ones. The first about the microeconomics of the labour market appeared already in 1969 in a conference volume of the German Economic Association called – following an old tradition – “Verein für Socialpolitik” (Association for Social Policy). There, he reproduces arguments of his book on wage theory underlining that a theory of wage should be more than a simple subcategory of price theory.

In his article “Wage levels and employment” (written in German in 1985) he shows – as in his text book - that Keynes (1936, chapter 19) convincingly demonstrated that a change in the wage level is no reliable way to more employment, since opposite effects cancel themselves out. The net result of all these effects is small and its sign is not known in advance.

As I argued above, these conclusions are not new and they remain correct even when adding the Pigou-effect. But since the infamous neoclassical synthesis denies them and pretends that unemployment is due to rigid and too high wages, it is necessary to derive and present Keynes’ conclusion again from time to time.
II. Wage- and price-dynamics

The contributions discussed so far were concerned with the (difficulties of an) explanation of the level of the real wage. Stimulated by the famous paper by Phillips (1958) the relation between the changes in the wage- and price-level and the employment situation (often measured by the rate of unemployment) became one of the central questions in the macroeconomic discussion, which centered about the Phillips curve in the form modified by Samuelson/Solow (1960) to present a relation between the rate of inflation and the rate of unemployment. Rothschild enriched this discussion with his article “The Phillips curve and all that” in the “Scottish Journal of Political Economy” in 1971.

At the beginning Rothschild addresses the question why Phillips’ article, containing no “sensational discovery”, had such an outstanding impact. Phillips was not the first to make the nominal wage rate dependent on the rate of unemployment, but “Phillips’s analysis provided a highly relevant instrument for policy decisions in a field where conflicting aims had become a major headache for the governments of most Western countries: in the dilemma between full employment and price stability.” (1971: p. 249, 1993: p. 128)

The most constructive part of Rothschilds article consists in the presentation of a small model of wage- and price-dynamics which allows to derive the conditions for a stable inflation rate as opposed to an unlimited accelerating one. The model consists of only two behavioural equations, the first concerning the wage dynamics.

The model is based on the idea that workers aim at a compensation for price changes and at a participation in productivity growth. These assumptions are largely consistent with the results of an inquiry in Austria reported one year later in a book which Rothschild (1972) published together with Nowotny and Schwödianer. The trade unions named as the most important factors in the wage negotiations: growth of productivity in their sector, the inflation rate of the last year and of the current year, and the changes in profits. The employers associations added the changes in the general wage and in the general productivity level and the rate of unemployment in the sector and in the country. Interestingly, they mentioned neither the growth of wages nor of prices in foreign countries.

The employers try to resist to these claims. The chances of the workers to enforce their claims depend on the employment situation, indicated here by the difference between the actual ($u_t$) and the inflation-neutral ($u^*$) rate of unemployment.
Therefore the growth rate of the wage level is given by²

\[
\hat{\omega}_t = a_1 \cdot \hat{p}_t^e + a_2 \hat{x}_t + a_3 (u^* - u_t) \quad (a_1, a_2, a_3 > 0)
\]

The sign ^ indicates rates of growth. \( w \) is the wage rate (per hour), \( p \) the price level and \( x \) stands for labour productivity per hour. In Rothschild’s model, in the wage negotiations (e.g. in the beginning of the year) the workers take the expected rate of inflation during the year into account, but derive their forecast by simple extrapolation (therefore \( \hat{p}_t^e \) will be replaced by \( \hat{p}_{t-1} \)). From the last term (which indicates a linear relationship) results a linear Phillips curve.

On the opposite side of the labour market, the employers try to get a compensation for any rise in unit labour costs, but the market situation does not always allow it. Therefore, in the price equation, \( b_0 \) may be smaller than unity³:

\[
\hat{p}_t = b_o (\hat{\omega}_t - \hat{x}_t) \quad (0 < b_o \leq 1)
\]

Here the parameter \( b_o \) indicates to what degree the firms are able to pass-through the changes in unit labour costs.

Inserting \( \hat{p}_{t-1} \) in equation (1.1), the inflation rates is determined by

\[
\hat{p}_t = b_o [ a_1 \hat{p}_{t-1} + a_2 \hat{x}_t + a_3 (u^* - u_t) - \hat{x}_t]
\]

which gives:

\[
\hat{p}_t - a_1 b_o \hat{p}_{t-1} = b_o (a_2 - 1)\hat{x} + a_3 b_o (u^* - u_t)
\]

The inflation rates tends to a final constant value, where \( \hat{p}_t \) equals \( \hat{p}_{t-1} \), which is given by equation (1.5)

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² Rothschild (1971) neglects the influence of the growth of productivity and he does not specify the last term. He simply writes \( f(u) \).

³ In Rothschild (1971) \( b_0 \) is not mentioned, it is implicitly set at unity.
Equation (1.5) shows that to every value of $a_1$ corresponds a different final inflation rate which remains constant so long as no shocks occur. The only exception to this rule is given by the case when $a_1 b_o$ equals unity. Then, the inflation runs astray, except in the special situation in which $a_1 b_o$ equals unity and $u_t$ equals $u^*_t$. This is the Natural Rate of Unemployment, which has a unique value only under these two very specific assumptions. In their overview and critique of the literature on the inflation–unemployment trade-off, Santomero/Seater (1978, p. 52 f.) mention the decisive role played by the value of $a_1 b_0$ (they set $b_0 = 1$) for the existence of a long-run trade-off between inflation and unemployment (without citing Rothschild (1971)).

Unfortunately, the mainstream economists with their disinclination against active macroeconomic policy measures did not take account of these insights\textsuperscript{4}. They continue to set implicitly $a_1$ and $b_o$ to unity, they do not even mention the possibility of $a_1 b_0 < 0$ and thus conceal that not every claim for wage or for price augmentation will be accepted by the employers and the buyers of the good produced.

Further articles concerning the wage and price dynamics appeared in English only in 1993 in the collection of essays which I mentioned already. The most impressive article was published in German already in 1978. The title is superb (esp. in German: Arbeitslose, gibt’s die? Literally translated: “Unemployed, do they exist?”) and full of irony. In this article Rothschild argues against the different approaches which try to minimize the problem of unemployment. Rothschild criticizes these approaches and he adds “But even more questionable is – in my opinion – the practice of choosing a highly relevant theme and then treating it in such an oblique way that it creates more confusion than understanding…” (1993, p. 19)

One way to do this is to call the unemployed people “people employed with job search” or to call them “voluntarily unemployed”. Rothschild assembles all the relevant and well known arguments against these attempts. He agrees, that unemployed people search for a new job. But that doesn’t mean, that the search is the reason for their unemployment. It will rather be its result.

\textsuperscript{4} Three years afterwards Auerbach/Moses (1974) even tried to prove Rothschild wrong. But Rothschild (1974) showed in his reply that his result are valid for all kinds of adaptive price expectations.
Especially the implications of the search theory for the relative volume of quits and dismissals are at odds with the facts:

“In recession periods, when money wages rise less than before or even fall, the number of quits from among the employed workers would have to rise. But the opposite is true. On the other hand we find that voluntary quits increase – in contradiction to the theory – in times of boom even when inflation rates are rising. To this must be added the general objection that a search for a better job does not necessarily require quitting one’s job and many workers do in fact change from one job to another without intermediate unemployment.” (1993, p. 22)

Another, more subtle and opaque way explains unemployment as “natural unemployment”. The corresponding NRU sets the upper limit to employment because of the behaviour of the workers who claim higher real wages as soon as the unemployment rate becomes less than the “natural” one. This leads in the short run to an accelerating inflation and in the middle or long run to a return to the natural rate. This approach neglects the dependence of the wage- and price-dynamics on the values of the parameters in the equations (1.1) and (1.2).

The second article I wish to comment concerns the fate of the Phillips curve in the time when stagflation sets in. Rothschild argues – eleven years after his 1971 article on the Phillips curve which I praised above:

“Stagflation forces us to see the theoretical, empirical and practical aspects of the Phillips curve in a new light and to reconsider previous arguments. This is particularly important because the Phillips curve is one of the rare examples where a close contact between theory and practice has been established so that the subject has to be attacked on this broader front.” (1993, p. 163)

Rothschild regrets that the discussion about the trade-off between inflation and unemployment has suffered from two short-comings: “The trade-off debate suffered under the uncritical acceptance of the existence of a reliable and fairly constant Phillips curve.” (1993, p. 165)

On the other extreme, the existence of a long-term Phillips curve was denied, mainly for dogmatic reasons. Rothschild explains this critique:

“The allegation of dogmatism rests on the impression that the main motive for these studies was not a desire to study in more detail the historically existing
Phillips curve phenomena, but rather an irritation about their existence. Phillips curves do not fit into the picture of neoclassical theory, with its tendencies towards price-determined full employment and market clearing. “ (1933, p. 165)

Rothschild then shows by an international comparison between 15 industrial countries which he packs up into three groups, with data from 1950 to 1980 that (with one exception in 1970 due to Switzerland) the group of countries with the lowest unemployment rate show the highest inflation rate and vice versa. Rothschilds conclusion runs as follows (p. 170):

“In the longer run it may still turn out to be true that though inflation does not lead to high employment, high employment cannot be obtained when very ambitious price stability targets are set. This would suffice to lead to Phillips curve and trade-off considerations. But the idea that there exist constant Phillips curves which can serve as a base for reliable trade-offs will have to be buried for good. “

Whilst I agree with him I was astonished that Rothschild does (in 1982!) not mention the two oil price shocks with their inflationary effects which shifted (at least for some time) the Phillips curve upwards.

III. Theory of Growth

Apart from the great visions about economic development by Marx, Schumpeter, Lewis and Rostow, the field “Theories of Growth” was still empty after World War II. As you will remember, Harrod (1939) had published an “Essay in Dynamic Theory”. Whilst the Hicksian IS/LM-diagram led to stable static equilibrium values of output, Harrod aimed at a model (a system of equations), for a situation “in which certain forces are operating steadily to increase or decrease certain magnitudes” (Harrod, 1939, S. 14).

His model of a closed economy without a public secteur consists of two very basic behavioural equations:

\begin{align*}
(2.1) & \quad S_t = s \cdot Y_t \\
(2.2) & \quad I_t = v \cdot \Delta Y_t
\end{align*}

Equation (2.1) stipulates a constant share of savings (S) in output (Y). Equation 2.2 presents the famous acceleration principle, linking investment (I) to the change in output. The
parameter \( v \) is determined by the capital-output-ratio and by the degree to which the entrepreneurs are ready to adapt their capital stock to changing output levels. Normally they have the alternative to produce their actual output with a higher (or lower) rate of capital utilization.

The model is closed by the equilibrium condition:

\[
I_t = S_t
\]

Solving the model one gets the rate of growth which is necessary to ensure equilibrium between demand and supply in every period. This rate depends on the saving rate and on the capital-output ratio. Unfortunately, the equilibrium growth path is highly unstable. Thus, Harrod was not successful, as Rothschild underlines (see p. 567), to give an explanation of the actual growth of capitalist developments. His model produces a potential growth path, but it does not inform about the actual growth path, once there has been a deviation from the equilibrium growth path.

This essential problem was neither attacked nor solved by Domar (1946) who took into consideration the capacity-enhancing effect of investment. The conditions for following the potential equilibrium growth path became still more restrictive when combining both models.

This unsatisfactory situation asked for a different approach to explain the economic growth process of the industrialized economies. An essential feature of this process is described by Keynes as follows:

“In particularly, it is an outstanding characteristic of the economic system in which we live that, whilst it is subject to severe fluctuations in respect of output and employment, it is not violently unstable. Indeed it seems capable of remaining in a chronic condition of subnormal activity for a considerable period without any marked tendency either towards recovery or towards complete collapse.” (Keynes, 1936, p.249)

To take account of this feature, it is necessary to enlarge or to replace Harrod’s accelerator-based investment function by a function which contains not only the destabilizing forces of the accelerator, but also stabilizing factors. Such an investment function is one basic element of Kaldor’s growth model which is the object of Rothschilds (1959) article on “The Limitations of economic growth models. Critical remarks on some aspects of Mr. Kaldor’s model”. Rothschild praises it “as a particularly stimulating and well argued piece of research”
(1981, p. 569). Contrary to Harrod (1939) Kaldor’s model contained not only the demand side but also the supply side.

In Kaldor’s investment function the volume of investment depends on expected changes in demand (destabilizing factor) and on changes in the expected profit rate (stabilizing factor). The expected profit rate \( \frac{P}{K} \) depends on changes in productivity and in the profit share, since

\[
\frac{P}{K} = \frac{P}{Y} \cdot \frac{Y}{K}.
\]

Kaldor suppresses the destabilizing factor by assuming, that the firms always expect the growth rate of demand of the last period; thus they invest according to a stable growth path. I shall not analyze further this aspect, because Rothschild concentrates his criticism on the “Technical Progress Function” (TPF) and on the saving function.

The TPF is the second basic element of Kaldor’s model and it represents the supply side. The TPF is based on the general relation used in the neoclassical theory between output \((X / N)\) per man (per hour) and the input factors labour \((N)\), capital \((C)\) and technical progress \((F)\), separated in its autonomous \((F_{aut})\) and its induced part \((F_{ind} = a \cdot \frac{\dot{C}}{N})\). This part of technical progress is induced by the growth of capital intensity. Only, when the parameter \(a\) is considered as a constant (what Kaldor rejects), the TPF can be reduced to the typical neoclassical production function.

Making the simplifying assumption that the partial elasticities of production for labour \((N)\) and capital \((C)\) add to unity, Kaldor’s TPF is given by equation (3.1).

\[
(3.1) \quad \frac{\dot{X}}{N} = (c + a) \cdot \frac{C}{N} + F_{aut}
\]

Kaldor insists first that it is useless and impossible to separate empirically \(c\) and \(a\), secondly that \(a\) is declining with \(\frac{\dot{C}}{N}\). Since these two assumptions are not essential for the working of his model, I shall not discuss them, but concentrate on the critical remarks of Rothschild against Kaldor’s TPF.
Rothschild starts with the praise, that the “TPF is a very ingenious assumption, and a highly simplified at that” (p. 572). Nevertheless, he criticizes the modern growth theories (he names Harrod, Domar and Kaldor, but his critique would also refer to the neoclassical growth theory founded by Solow) for three shortcomings (p. 568 f.):

1) The limited number of variables taken into account and the simplicity of their functional relationships.

2) The neglect of historical, sociological and institutional factors.

3) The starting assumptions of an equilibrium growth at full employment of capital.

The first and second critique demonstrate once again the preference of Rothschild for an economic theory not isolated from other social sciences. Rothschild admits that in the early stages of a theory the first two limitation are a “legitimate analytical device”. He extends this “excuse” even to the assumption of full employment. With respect to Kaldor, this last concession is to my view much too friendly because the assumption of full employment is not at all necessary to derive the TPF, which is – since it is derived from a production function – nothing else but the line of the potential output growth at different values of the growth rate of capital (per person).

The correct procedure by Kaldor should have been to clarify this point and to make clear that he assumes that the economy always produces on the TPF because the entrepreneurs expect a growth along this line.
In the next stop, Kaldor answers the question: Which point on the TPF will be realized? Here, Kaldor uses the fact, that above the 45°-line the productivity of capital \((X/C)\) is growing, and beneath it is declining. In Kaldor’s model there is a positive relation between the volume of investment and the productivity of capital because the entrepreneurs expect a parallel evolution of this value and the rate of profit (which has a positive influence on the volume of investment).

Thus, if the economy is not on point \(P_1\) where the productivity of capital remains constant, but (e.g.) on point \(P_0\) there will be additional investment and the economy will move to \(P_1\). Hence \(P_0\) presents a stable equilibrium.

Kaldor uses the saving function developed in his “Alternative Theories of Distribution” (1955/56) to make sure that total savings can always adapt to total investment even with full employment via a changing income distribution. The latter must be very flexible. Rothschild criticizes another point, namely that the saving rates of the two groups of income receivers considered in his theory will not be constant in the long run.

I fully agree but I think that the recourse on Kaldor’s distribution formula poses a more serious problem of model consistency: The following equation (3.2) shows: The parallel changes of the profit-rate \((P/C)\) and the productivity of capital \((X/C)\) are only assured, when the distribution of income does not change.

\[
\frac{P}{C} = \frac{P}{X} \cdot \frac{X}{C}
\]

Contrary to this condition Kaldor’s theory of distribution allows large changes in the distribution of income to guaranty the equality between savings and the investment. Therefore one has to choose between Kaldor’s two theories. Either the distribution of income is rather stable, then Kaldor’s growth model is stabilized, or the distribution on income is subject to severe fluctuations, then his growth model breaks down.
IV Final remark

My overview over the fields assigned to me should have shown: Rothschild did not accept the reduction of economics to a calculation of optimization by selfish individuals acting in isolation in a given environment with the only aim to maximize monetary income.

Instead he insisted to take into account other influences on human behaviour and not to neglect arrangements – like collective bargaining – to change the environment to the advantage of the actors. Therefore he propagated persistently the integration of psychological, sociological and institutional factors in the economic analysis and in following these ideas he produced many very valuable contributions to economic theory.

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Discussant: Gunther Tichy*

Labour market reforms -
Wage restraints and economic growth

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I hesitated to accept the invitation to discuss Kromphardt’s contribution to this conference as I expected very few differences in our assessment. And so it is. I agree to almost everything Kromphardt said, and I underline it. It would be Beckmesserei and boring for all of us, not least for me, to get lost in a discussion of irrelevant details of our potential differences. So I will use the time allotted to me to expand on some aspects not treated by Kromphardt, given his time restraints, and on one further aspect largely neglected by this conference.

Let me first deal with the second, underexposed aspect, *Rothschild’s stance on economic theory*. For most authors, and even more so for neoclassical ones, a theory is a straightforward and universally valid explanation of economic problems by a limited set of explanatory factors. Real business cycle theory is a good example: technology shocks are the very one and exclusive explanation, developed on the basis of the famous unit root evidence. Any other explanation is aggressively rejected. More than one explanation is not necessary as “Business cycles are all alike” (Lucas [1977] 1981, 218), and former explanations had been an “empirical failure on grand scale” (Lucas and Sargent 1978). Wage theory in the neoclassical world is nothing more than price theory applied to a different market. If this market is less than perfect, this is a problem of the market, not of the theory. It is the task of policy to streamline the market to make it compatible with theory.

Rothschild has a very different perspective on this subject, which I once formulated as article 6 of Rothschild’s commonsense economics: “It is better to adapt theory to reality than to press reality into the straitjacket of theory” (Tichy 1985, 13). Rothschild strongly rejects the existence of straightforward and universally valid explanations of economic problems in general, and even more so explanations by a limited set of exclusively economic arguments. The main focus of Rothschild’s theory is the interaction of specific elements of diverse models which add up to different results under different conditions of the world. In doing so, he is well aware that an economic problem may become indeterminate. An important task of Rothschild’s theoretical explanations is to work out clearly what we know, what we can assume with some reservations, and what we do not know.

“The theory of wages” (1954), which King (in this conference) characterised as both a textbook and a thought-provoking treatise, can serve as a perfect example of this stance on theory. In the introduction Rothschild emphasises that he “almost exclusively [deals] with wage theory” (v, original emphasis), but nowhere in the book straightforward and universally valid explanations of economic problems by a limited set of arguments can be detected, and even less so a radical demolition of former theories. Rothschild fights with a more elegant blade. Part One of the book (55 pages) starts with “Wages under perfect competition”, with subchapters on Demand, Supply, Hours and conditions for work and labour and capital.
Rothschild describes traditional theory in a fair way, but concludes “that in wage theory questions arise which can by no means be answered by marginal productivity theory alone” (26), and that “the competitive equilibrium … is not necessarily a unique point” (48). Part Two (77 pages) deals with “Wages in the actual world”. Subchapters deal with Friction and barriers, Monopolistic conditions, Monopsonistic conditions, Trade unions, Technical progress, Wages and the trade cycle, and Wages under full employment. This opens another wide space of potential outcomes; I will return to some of these problems. Part Three (26 pages) of Rothschild’s book: “Wages and the community” deals with Minimum wages, Wages in the national income and last but not least with “The limitations of a purely economic theory of wages”. It comes “to the conclusion that the purely economic theory of wages … represents only one aspect, and not even the most important one, of the entire wage problem. It explains the minor adjustments that follow in a capitalistic economy after the basic conditions of supply and demand have been fundamentally influenced by social and political action. A complete theory of wages will have to include the latter aspects and will break down the rather artificial frontiers between economics and sociology.” (175)

Rothschild himself states his intentions and his stance on theory clearly: he will not present a “‘simple’ theory” “far removed from the realities of the very complex labour market. … Rather, the reader will find material which will give him a clearer view of the relevant factors influencing the supply and demand for labour, and which should enable him to piece these factors together as required by any particular situation” (13). This is almost the opposite of what Lucas-type economists’ intend. Labour market conditions are not all alike and one-dimensional theories definitely go astray. Rothschild’s theory has no glittering mathematical elegance. On the surface it appears to be more modest and less significant. Smaller minds may consider it as purely narrative. In fact, however, it is a wider, deeper and much more relevant theory, a guidance for intelligent and thoughtful experts, instead of a simple cooking recipe for mechanical operators.

My second topic deals with problems at the interface of labour-market theory and labour-market policy: the role of labour unions, the effects of minimum wages and whether full employment is sustainable.

Chapter IX of the “The theory of wages” deals with “Trade unions and bargaining power”. Rothschild refers to part one of the book, saying that “even pure wage theory does not give a completely determinate answer to the question of the wage level, but that, on the contrary, more than one equilibrium may be possible with a given quantity of labour and capital. … Wherever such situations exist, bargaining may bring about a movement from a lower to a higher equilibrium without causing any long-term unemployment.” (109) This is even more
true in monopolistic or monopsonistic markets which allow additional profits. But can labour unions press for higher wages generally, not only in specific trades? “The whole question of bargaining power”, Rothschild says (112), “depends … on the factual conditions governing the expenditure of the capitalist class. If their marginal propensity to consume is large, bargaining activity will be capable of making considerable inroads into their consumption …” But under modern conditions capitalists’ propensity to consume is rather low, and so “the bargaining strength of labour is extremely weak. The position changes, however, when we substitute for the static society … the normal world of technical progress” (113). “By pressing for higher wages the trade unions may be able to reduce the rate at which capitalist consumption increases. … Thus we see that there is within the framework of a private enterprise economy a certain range within bargaining strength can operate. But it will also be seen that the rigidity of consumption habits will set serious limits to the results that can be achieved within this framework.” (114). And Rothschild adds the importance of strike and strike funds for the result.

The chapter on trade unions’ bargaining power is a wonderful example of Rothschild’s mastery of combining different aspects of theory and realistic assumption to flag the borders between economic law and power. Another example, even more relevant in our days, is the consequences of minimum wages. The usual argument is that a minimum wage will increase unemployment. Rothschild introduces his argumentation by pointing towards the peculiar fact that we are fully accustomed to state intervention in working conditions since a decade or so, but that we still find state intervention for minimum wages incompatible with our economic system. At least in certain trades – he mentions sweated trades or trades employing young women – labour unions tend to be weak and market wages low, due to their restricted bargaining power. In these cases minimum wages could certainly help, and a legal minimum wage in one industry or occupation will not raise important problems: some temporal unemployment may arise, but the other industries will absorb the workers in most cases under normal conditions. Nevertheless: “In times of depression a policy of fixing minimum wages in some trades would have to be much more timid.” (151) A national minimum wage, contrariwise, “certainly demands separate considerations. … Obviously it will not be sufficient to determine a certain minimum money wage”, as a shift of the wage cost to prices is the most likely result. Furthermore the standard of living and industry’s capacity to pay must be taken into account, both rather catchy concepts. It is not easy to find the appropriate level and the optimal form of a national minimum wage. The social advantages and the effectiveness of a minimum wage are in any case the greater the more flexible it is. However: “Even with a well designed and conscientiously enforced national minimum wage law the state will not be able to alter fundamentally the income structure of a capitalist economy. … But limited effects can probably be reached with a minimum wage law. It can prevent bad
cases of exploitation of workers … who are in a very weak bargaining position … Moreover, the existence of a minimum wage can provide a constant stimulus to improvements in productive methods and organization.” (155)

The third – and last – topic at the interface of labour-market theory and labour-market policy I want to add to Kromphardt’s remarks are “Wages under full employment”. Rothschild’s chapter XII starts with the remark that traditional wage theory always assumes a state of full employment, which didn’t exist at that time, and which changes the process of wage and price formation considerably in real-world institutions: labour unions’ power increases, the resistance of employers against wage claims decreases as they can shift the burden to prices – the problem of a wage-price spiral arises. Rothschild did not use this term at that early time,¹ but he clearly described the process and its potential danger. But he argues that the likelihood of a wage-price spiral getting out of control is reduced by several factors: increasing productivity gives some leeway to wage increases, the pressure of increasing wages will boost productivity further, and the institution of the wage bargains prevents changes at short intervals. A lasting solution could be found by an incomes policy, a term Rothschild did not use in 1954, but of which he had a clear vision: “Once collective bargaining has reached the stage where wage increases are brought forward with a concurrent demand that prices be kept unchanged or raised less than proportionately, the destabilizing effect of the wage-price situation under full employment will disappear. At the same time, however, the wage question will assume greater dimensions than it had in former days. For not only will trade unions demand greater information about the business accounts of firms; the whole question of the social and functional justification of certain profits in general will come into the focus of the wage bargaining.” (142) To this point, Rothschild in 1954 (!) was ahead not only of his time but of our time as well.

The other problem Rothschild identifies in the context of full employment is the lack of flexibility of labour. “Changes in the industrial structure can now no longer be achieved by a redistribution of the unemployed, but depends on the transfer of workers from one economic sector to another.” (144) “The wage policy of the trade unions will have to be changed from isolated wage bargains in separate industries to a national wage policy which pays attention to the necessary wage differentials, which may have to be of a considerable magnitude in order to stimulate the proper distribution of labour over the various branches of industry.” (146-7, emphasis in original). The wage differentials must be supplemented by abandoning restrictive

¹ It is used in the completely revised German edition of 1963.
rules, ample training and retraining and a well-equipped and well informed system of employment exchanges. “But the highest grade of adaptability in a full employment system will certainly be reached only when the whole structure of industry becomes democratized. Once the workers become active participants … a new sense of interest and responsibility may develop that could provide a new driving force for mobility, where the recognition of necessity takes the place of purely monetary incentives.” (148)

I deliberately drew your attention to these more visionary aspects of Rothschild’s wage theory, to his scepticism with regard to the prevailing order and his vision of a reorganization of the economy. Rothschild was convinced of “living in a period, in which the new circumstances request in a particular high degree new ‘visions’” (Rothschild 2004, 209). Today we are even more sceptical than Rothschild was in the early fifties, and we still lack visions: We have experienced the demise of the centrally planned economies, we are experiencing the malfunctioning and the breakdown of financial markets, and we suffer from policy failures on grand scale. Income distribution is deteriorating drastically and social unrest increases. Economic theory, strongly divided as to the causes of all that, searches hopelessly for a general, a unified explanation. And that is what Rothschild teaches us: There is no general theory that fits all problems all the time. There is no alternative to an eclectic approach: formulate the relevant problems as accurately as possible, analyse the existing theories as to their assumptions and their constituent elements, and then try to work out an answer applying all relevant aspects of diverse theories, all your knowledge about institutions and the history of your problem, piece these factors together as required by any particular situation and combine the conclusion with commonsense. To give the last word to Rothschild: “Different choices will lead to different approaches, each of which will spotlight a different aspect of a complex problem. Therefore a certain degree of variation in methods, tradition and starting points may be an asset rather than a disadvantage.” (Rothschild 1964, 28).
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Panel Discussion

Kurt W. Rothschild – His Influence on Economic Research, Economic Teaching and Economic Policy in Austria

Panel Discussion „Kurt W. Rothschild – His Influence on Economic Research, Economic Teaching and Economic Policy in Austria“; Herbert Walther (University of Economics an BA, Vienna), Günther Chaloupek (Chamber of Labour), Christoph Leitl (Chamber of Commerce), Wilfried Altzinger (University of Economics an BA, Vienna), Karl Aiginger (Austrian Institute of Economic Research, WIFO), Peter Mooslechner (Oesterreichische Nationalbank), Johann Brunner (University Linz) (f.l.t.r.)

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Kurt W. Rothschild: more than a simple scholar or researcher

Kurt W. Rothschild: a role model inspiring many generations of Austrian leaders

* President of the Austrian Federal Economic Chamber, Austria
Kurt W. Rothschild was more than a scholar or economic researcher. He was an exemplary man, intelligent and hard-working. An institution by himself. A man, undoubtedly an inspiration to many generations of Austrian economists, businessmen and politicians.

The legacy of Rothschild - what would he say today, given the current crisis in Europe?

Rothschild’s thinking was shaped by the economic environment and living conditions from the time he grew up. He witnessed the economic and social consequences of the global economic crisis of 1929/1930 and the rise of unemployment and poverty. He critically examined the reasons and consequences of unemployment, which he considered to be a danger for democracy and freedom.

Rothschild’s conviction was that the market alone cannot solve all existing problems. The State or government would therefore need to offer adequate framework conditions where companies and individuals could act and interact.

In huge economic crises like in the 1930s or as we see it today, market forces by themselves would not be enough. Rothschild would most definitely find the origin of both crises in the financial markets.

If asked about the current crisis, Rothschild would probably note that speculation has played a big role and needs to be regulated more tightly. He would wish that banks would become more risk averse and avoid taking out bad credits, and argue that they should build up more equity capital and that tax havens need to be controlled and regulated. The rising complexity in financial markets over the last decades has increased the possibility to make huge profits and has offered many opportunities to investors, but at a certain risk. Countries need to calm the markets and contain the risk by implementing decisive policy measures in order to keep speculation under control. He would most definitely reproach the dangerous levels of speculation and the fact that financial markets “set the tone” instead of governments.

Rothschild would probably also say that the unemployment effects in both crises were potentially severe, yet less severe in our days than in the 1930s, when the unemployment rate reached 25 %. If asked about the government’s role in how to react, Rothschild would most definitely propose intervention from the State and demand support by the government to reduce the negative effects on the real sector.
One other certainty is that Rothschild would concede that governments would recognize the problems, but at the same time he would disapprove of them for not doing enough to solve the crisis and the significant lack coercive action – not only in Austria, but especially at the European level.

Rothschild would presumably see that the crisis would be a strain on the principle of the welfare state, as a prolonged crisis would potentially lead to the possibility that people would start to revolt in the longer run. Already today we see people on the streets in many countries. Fortunately, most of these protests are not yet too violent. But Rothschild would undoubtedly urge politicians to react and offer solutions in order to prevent this dangerous development from actually taking place. Supporting consumption would be one piece of the puzzle.

Given the advanced – but not completed – integration process of the European Union in a more and more globalized world, Rothschild would definitely prompt politicians to think and act on the global level and not on the basis of a nation state. This is especially true for a small and open economy such as Austria. He would complain about the loss of leadership in Europe and about the failure of politicians if they were to think that addressing the crisis would be possible at the national level.

We need global governance, but politicians do not deliver. We also need adequate framework conditions for the economy to prosper and in order to support and defend our preferred economic model: a social market economy with free competition.

Rothschild would concede, though, that government spending in the time of and after the crisis – the Austrian government decided upon economic stimulus packages just after the financial crisis 2008/2009 – was the right “Keynesian” thing to do. Countries like Switzerland or Sweden show, however, that one also has to save money and reduce the deficit and the debt level in good times. This might be difficult, but it is most definitely the right thing to do. And while saving, one should not forget about growth; governments would still have to decide upon investments in the future (e.g. education at all levels, investment in human capital and skills, new technologies and R&D). These investments are important to foster “our” comparative advantage.

Asked about the role of the European Central Bank, Rothschild would recommend swift and decisive action, recall the importance of sufficient liquidity in the markets, and would argue that trying to keep the inflation target alone would be too restrictive and counterproductive for the economy.
Rothschild would also say that structural reforms were necessary now – more than ever. He would be very much in favor of a financial transactions tax at the global level.

At the national level, Rothschild would probably propose raising or introducing new taxes, but one has to think about the fact that they would negatively affect Austria as an attractive business location.

**What can we learn from Rothschild?**

Kurt W. Rothschild was always optimistic. He would state that economics has a lot to do with psychology and expectations. He would definitely agree that the current situation is serious, but if politicians were to make the right choices and were to act together, the eurozone would not break up.

With his ability to analyze problems and situations, his experience, but also with his character, Kurt W. Rothschild became highly influential in economic policy making in Austria. Rothschild did not stick to economic theory. He considered theory to be an important tool, but he was always practically oriented. He was always open to other views and opinions.

His ideas, contributions to economics, his proposals and evaluations were numerous. They undoubtedly contributed to and helped Austria and Austrian economists to get noticed and recognized on the international stage. With his death, Austria lost a very distinguished and internationally renowned economist. Many generations will benefit from his knowledge and work. His ideas and contributions to the field of economics will be remembered and will prevail.

Given the current situation in Austria, Europe and the world, it is truly sad that we do not have the opportunity to ask Kurt W. Rothschild for his advice and opinion. We can only guess what he would say and recommend and hope that politicians will follow his lead.
Günther Chaloupek*

Kurt Rothschild’s impact on Austria’s economic policy

* Director of the economic policy section at the Chamber of Labour
Although Kurt Rothschild started his career as a professor of economics at the University of Linz only in the late 1960’s, the influence on economic policy making in Austria which he had from this position was – and still is – considerable. As a graduate from the University of Vienna, I did not have the benefit of being Rothschild’s student, but his writings were of great importance for me and a group of fellow young economists who had just joined the economic research department of the Vienna Chamber of Labour. We always kept a close eye on his new publications. In the early 1970’s, inflation was the central issue of economic policy. When we wanted to discuss Rothschild’s essay “The Phillips Curve and All That” which had recently been published in Scottish Journal of Political Economy, we still had to obtain permission from the director to make the sufficient number of copies, since in 1972 there was only one copy machine in our institution. Fortunately, we were able to convince the director that this would be an important contribution to the formation of the Chamber’s position on the problem of inflation.

Kurt Rothschild deserves credit for having made an important contribution to what has come to be the general conceptual framework of modern economic policy in Austria. What I mean by this is that in the 1950’s and even in the 1960’s, such things as the preparation of regular macroeconomic forecasts within the framework of the system of national accounts and the concept of an anti-cyclical macroeconomic policy were rather new and far from uncontroversial in economic policy circles as well as in the economic faculties of Austrian universities.

As regards the orientation for economic policy, Kurt Rothschild has always been a steadfast advocate of Keynesianism. He contributed substantially to the dominance of the Keynesian economic doctrine in Austria’s economic policies for more than two decades. Even later, as the tide of supply side economics and market fundamentalism has swept into Austria, the impact of Rothschild as teacher and advisor is still visible, since Austria has not experienced such an anti-Keynesian turn of its economic policy as it occurred, for example, in Germany.

As an economic theoretician, Kurt Rothschild did not narrowly focus on a single direction of economic thought. Rather than drawing a sharp demarcation line towards other schools of thought, he aimed at a synthesis which combined and integrated elements of various theoretical approaches. Rothschild himself called his own theoretical orientation “pluralism of methods” – ”methodischer Pluralismus”, by which he drew together elements of schools of economic thought as different from each other as Keynesianism, neoclassical economics, Marxism, and the Austrian School. He has never denied that neoclassical economics, which dominated economic teaching at the time when Rothschild studied economics in the UK in the 1930’s, left a strong and lasting imprint on his way of thinking – to be sure, Alfred
Marshall’s version of neoclassical economics, and not the form of mathematical general
equilibrium theory that has increasingly perverted economics since the 1960’s. Due to his
familiarity with the neoclassical way of economic reasoning, Rothschild’s ability to “go
against the grain” of neoclassical economics (“gegen den Strich”)1 was unmatched by his non-
orthodox colleagues. To be sure, Keynesian macroeconomics formed the core of Rothschild’s
economic thinking, but at the same time he was open to useful ideas from other currents, and
he was always searching for new ideas. In an interview with an Austrian daily newspaper
during the crisis year 2009, he said that “we are in a completely new situation for which we
have only insufficient theories and models.” This is a very candid statement, quite different
from the grandiloquent appeals to “the future” which often serve to conceal ignorance.

Openness of mind for Rothschild also implied readiness for dialogue – with his students, his
colleagues, but also with politicians and economic policy experts. He often emphasized the
limits of economics as a science, and he rejected the conceit that economic theory could serve
as a basis for defining a social optimum in an objective sense. He rejected the analogy
between utility maximization by the individual choosing between alternative needs and
choices which are made collectively at the level of society. The latter implies genuine
conflicts of interest between different groups which cannot be reduced to a “simple calculus
of economic rationality”2. Economic policy goals are not objectively given in themselves, nor
does there exist a clear-cut hierarchy among them. Rothschild argued in favour of pragmatic
solutions to conflicts of interest, for example through a system of “social partnership”, and his
attitude towards neoclassical and other utopias of a perfect state was sceptical. This position
serves as an important message about the situation today, when the ideology of financial
market capitalism has failed, but has not really been abandoned by many decision makers in
economic policy.

Finally: Kurt Rothschild’s scientific thinking was directly or indirectly always oriented
towards reality. His interest in current events was genuine and remained strong until the end
of his long life. He seldom missed one of the meetings of the Kautsky-Kreis, a discussion
forum for economic policy questions which he had joined in the 1960’s. The style of
economic thinking and writing which Kurt Rothschild has cultivated can still serve as a
standard today. In its inevitable abstractness, economics will always have difficulty making

1 According to Hajo Rieses laudatio at the occasion of Rothschild’s 65th birthday (Riese 1979,
p. 486).

2 Rothschild 1989, p. 114.
its insights and findings understandable to a wider public. Therefore, economists must be
certain that their work is applicable to real problems. It does not necessarily mean that
economics must always directly aim at solutions for concrete problems, but it should at least
aim at a better understanding of reality. I believe that I am not the only practical economist
who has the impression that, for some time, the distance between theoretical economics and
reality has been increasing. I think in this respect there is a lot to be learned from Kurt
Rothschild.

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Karl Aiginger*

Oligopoly and uncertainty - the cornerstones of Kurt Rothschild’s socioeconomic agenda¹

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¹ I am grateful for comments by Alois Guger, Peter Mooslechner, Gunther Tichy, Ewald Walterskirchen even if I did not follow all their suggestions, since this should remain a very personal tribute to Kurt Rothschild’s academic and personal life.
This note lays out ten hypotheses about how Kurt Rothschild’s choice of scientific topics was related to his political and ethical agenda. The first two observations claim that it was oligopoly theory in which Kurt Rothschild achieved his highest academic acclaim; and they show why this was such a good choice for a political figure. The following paragraphs refer to his specific interpretation of uncertainty, to which I was at first reluctant to subscribe, but which was instilled with new life in the recent Financial Crisis. Following these remarks are subjective observations about the relationship between his economic world and his character, which was firm, humorous, humble (and in some rare but important occasions) angry and on his six decade long connection with the WIFO (Austrian Institute of Economic Research). The final comments relate to ethical and practical messages he left and finally what would have made him angry about economists after the Financial Crisis. All these observations are restricted by the fact that I knew Kurt Rothschild for only 40 of his 96 years, and was director at WIFO for only five of his 63 years of collaboration with this European research hub.

Thesis 1: Kurt Rothschild’s field of research, on which he built up his early academic reputation, was oligopoly theory. This is a surprising but excellent choice for somebody interested in the progress of society.

Oligopoly theory tells us that firms have the leverage to shape their environment; managers are not mathematicians maximizing an exactly defined profit function given a set of exogenous variables. They are strong minded human beings, determined and able to do the best to achieve profit in a demanding, unshaped, chaotic and fluid environment. As a rule firms also have a few very determined competitors, using instruments known or innovative, fair and unfair, aiming for collusion or for war.

Such a broad array of strategies in which many choices can and must be made, is not available under other forms of competition – neither in "pure" competition, nor monopoly. The world is richest in strategies under oligopoly; managers can choose and shape strategies, speculate, collude, innovate, and think strategically. And if you add power, pressure, class interests, lobbying and side payments, the choices available are even larger and more realistic.2

Thesis 2: The rich set of strategies existing under oligopoly theory mirrors the available choices for economic policy and economic systems. We do not have to choose between one well defined socialist planned economy (e.g. Marxian communism) and an alternative

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2 Another field in which Rothschild contributed to economic theory profoundly and persistently was wage theory (see Rothschild (1954) and Tichy (2012))
capitalist market economy (e.g. Manchester capitalism), but instead there are a plethora of different systems which may fit at different stages of development, to different cultural backgrounds, histories and specific interests; and they can all coexist in a globalized world.

Furthermore, many economists and politicians think the solutions are clear cut, that the given circumstances point towards only a small set of options. "Handlungszwänge” (external constraints) are believed to dictate what has to be done in a competitive, globalized world. Rothschild did not claim that "one model fits all", not even Keynesianism (a heresy for which he was rebuked by Joan Robinson). He maintained that there are many options, which may differ across countries and their particular stage of development. He believed nothing was straightforward, but rather that things were complicated; they could not be known ex ante but evolved, amidst a multitude of vested interests.

**Thesis 3:** If there is one overarching economic message Kurt Rothschild wanted to deliver, it was that uncertainty is at the core of economics. Mechanisms and mathematical techniques which are applied to cope with uncertainty are no more than nice tries but to no avail. No mathematical formula, no insurance is able to cope with "true uncertainty" (in contrast to risk).

This message is built on the ideas of Knight, elaborated and deepened by Keynes, but often forgotten by Keynesians and Post Keynesians. The idea that uncertainty is not insurable has recently gained dramatically in importance. Uncertainty, together with waves of optimism and pessimism, and profit maximizing firms, leads to a dangerous instability in the financial sector and in economies as such. Financial systems are inherently unstable and therefore have to be regulated. And regulation is no easy task in a world of mighty international oligopolistic firms and national multi layered government systems amounting to 30%-50% of Gross National Product in industrialized countries.

I wrote a book on Production Theory under Uncertainty (Aiginger, 1987) in the eighties and tried hard to model utility maximizing firms in – what I thought to be - a Keynesian environment: a post-post-Keynesian model without market clearing, with inventory build ups and disequilibria. I felt very proud to have avoided the neoclassical ideology of quickly and perpetually clearing markets (with only differing “states of nature‘ representing uncertainty). Keynesian uncertainty had finally found its place in the decision making process of firms, I thought.

However, I earned only one of Kurt Rothschild’s typical statements: "Well done, given what you tried”. When I asked, I received the verdict that what I had modelled was not Keynesian
uncertainty: "Keynesian uncertainty can never be built into models". What Keynes meant was "true" uncertainty; here all decisions are different because they follow a completely different logic. What I had modelled was "petty uncertainty" or insurable risk. The proudest piece of my academic, economic life had been dwarfed. But not for a long time, because then Kurt Rothschild encouraged me to address this problem directly. I then modelled differences between "severe" uncertainty (in which decisions could not be changed ex post) and "petty uncertainty" under which a part of the decisions can be adjusted ex post at some costs (see Aiginger, 1988). I could claim that my models referred to a middle ground between uncertainty and risk. I was rescued, and could continue to claim to be some sort of post-post-Keynesian.

Thesis 4: The financial crisis provided forceful evidence that true uncertainty differed from calculable risks. Despite ever more sophisticated models, no large forecasting model could predict the crisis. Many economists had warned about the housing bubble in the US, about irrational exuberance on the stock markets, about the size of financial transactions, about the amount of money looking for profitable investments, about disequilibria between the US and China and so on, but no model could predict the interrelation between these problems and the sudden spread of the consequences across markets and regions. The failure to predict the timing, depth and scope of the crisis occurred on a macro level, on the level of banks and investment houses, and it affected seemingly well diversified portfolios across products and regions. Some economists did predict an eventual breakdown of the economic system, but had done this in past crises which afterwards proved only to be temporary or regional.

As if to prove that Kurt Rothschild was correct, one million mathematicians had taken over banks and other financial institutions over the past decade. They were hired to limit, even eliminate the risks of any financial investment by bundling (securitization), adding another rating, and diversifying over firms and continents and between world class and junk firms. The new innovations were not disadvantageous from the start; they created a huge globalized financial market, which helped millions of people to rise above the poverty line (modestly defined by $1 or $2 per day). But regulation did not step up with globalization. Politicians persuaded publicly supervised firms to give credit to everybody, instead of persuading firms to pay higher wages, or encouraging trade unions to do so. And so the last/recent financial crisis came about.

One of the reasons - if not the most important one - was that neither mathematicians, nor policy makers, nor bank regulators, nor economists had respected the concept of true economic uncertainty. Today – better late than never – the uninsurable part of risk is acknowledged; we call it "systemic uncertainty" and created systemic risk boards and request
that systemically important financial institutions (SIFIS) hold higher equity reserves (as compared to petty banks like Raiffeisen, Erste Bank, Landesbanken, Kommunalkredit or Hypo Alpe Adria). 

Thesis 5: Having room to manoeuvre, the existing leverage of oligopolistic firms can be used for good as well as for bad. This is to some degree reflected in the objective function of a firm, or in the welfare function of society. But Rothschild claims that political processes as well as the conduct of individuals is important. Therefore Kurt Rothschild wrote a book on Ethik und Wirtschaftstheorie (1992).

Managers and entrepreneurs may shape the environment for the good by adding value to products through innovation, by adding quality, by product upgrading, through services or for the worse by using financial power to expropriate labour or resources, by collusion, by raising entry barriers, by hijacking regulatory bodies, by subscribing to or complying with corruption, dictatorship, or wars to change market structures or the society.

Political groups can engage themselves for a better life, more justice, equality of opportunity, the future of the planet or they can opportunistically exploit fears, prejudices, declare the superiority of classes, elites, religions, groups, lifestyles.

Thesis 6: Kurt Rothschild had strong beliefs which shaped his thinking. I do not know how they came about (some were inherited, some shaped through experience, some based on empirical economics), but together they enabled his calmness, determination, and humour.

You felt these beliefs, when you entered his room. But they were not thrown at you if he started to speak. Ever polite, humble, and pretending not to know all too much about the subject for which you were asking advise. But you were never told that he did not have time for discussion.

He gave you advice, if you wanted it. If not, you could only present your ideas. But you felt that he knew more and that he approved of some parts of what you said and disagreed with others. And he would tell you about your omissions and shortcomings, but only on request.

3 This hypothesis is an interpretation, how Rothschild’s insistence on the character of uncertainty could have been useful in the upcoming of the crisis, he did not publish himself much on the crisis. In personal discussions he persisted to realize the enormous differences in the level of the recent crisis with that in the thirties of the last century (“do not forget, children of unemployed people had no shoes at that time, they had to go barefooted into school”)
On the other hand, you could be absolutely sure that he did not criticize you after you left his office. The worst he would say about you was "this is a good paper considering his age and his education" (a little forgiving smile about your conservative background, your teachers, and university as in my case). Maybe sometimes you would have liked him to be a little bit more explicit about why he did not like a paper, thus forcing you to sharpen your arguments.

_Thesis 7: Kurt Rothschild could become very determined, angry, and strategic, if it was important (for the university, for WIFO, for society; but never for himself personally). If he felt somebody was treated unjustly, if a bad policy was pursued with cynical arguments, if selfish interests or profit motives were carefully hidden (and argued for the sake of the "poor"), he became angry._

In this case he could mobilize resources against such a strategy, and squash unjust arguments with polemic counter arguments. Rothschild could slam doors if a commission chose the wrong candidate and he usually believed this was done by a hidden conservative political agenda (as he had experienced for decades at Austrian Universities).

But this was the exception. Kurt Rothschild was patient. Somehow he knew he could wait and that history and justice and the good arguments were on his side. He seemed to have anticipated his longevity, or he triggered it through his humour and stress resistance. Asked whether he worked on the weekend, he answered, "Why should I? The week would be too short anyway, whether I worked five or seven days".

He did not strive to be in the media, he did not want to be the doyen of Austrian economists, the best publishing scientist at WIFO. Good ideas if developed, even if dropped on invitation, would eventually find their destination.

_Thesis 8: Kurt Rothschild has two singularities which will pin him down in the history of WIFO. The first one is easy: he worked at WIFO for 63 years. He started in 1947, specializing in Trade Theory and Labour Economics, but contributed in fact to all important economic topics. The second singularity, which will be harder to achieve by a WIFO scientist in the future, is that he was recommended by a Nobel laureate. This Nobel laureate was the founder of WIFO and antipode to his political views: Friedrich August von Hayek._

This fact demonstrates that his scientific contribution and his ethical position were respected by economists with different views on social and economic questions.

_Thesis 9: There is one command (ethical recommendation) in Kurt Rothschild's book on Ethics in Economics (1993), which I will never forget, because it is neglected day by day (and_
I may find traces of this in my own publications): an economist (scientist) has the obligation to supply all the evidence that exists, the complete truth.

This implies that if there is positive and negative evidence on some economic hypothesis, you have to cite both, and not only the evidence in favour of the political conclusion you want to draw. As easy as this looks, it is very unusual for this advice to be followed.

Kurt Rothschild was never so naive as to believe that scientific research is absolutely objective. There are always some traces of subjectivity, vested interests play a role, along with one’s personal motives, history, and education. But a scientist should downgrade this influence, instead of using it to indulge in his own prejudices and political interests.

There are some rules which Kurt Rothschild suggested to me which would lead to better policy advice; rules that were recommended (not necessarily devised) by him. The first one was that it is more important to raise an important question than to answer an unimportant one. The second one was that it is better to be vaguely right rather than precisely wrong.

Thesis 10: One final reason why Kurt Rothschild will stay in our memory is that he did not present a complete, bounded and self-contained theory, but that he pinpointed problems in societies as well as shortcomings in theories. Each narrow theory will be wrong under most circumstances.

He forgave economists for not predicting the recent financial crisis. The extent of the crisis was disadvantageous for many people and a failure for economists. But Kurt Rothschild's redemptory assessment would change into incomprehension, if some economists proclaimed to explain the occurrence of the crisis using their own narrow theory (be it neoclassical or one-sided in any other narcissistic fashion). And he would become angry (and slam doors again) if economists did not change their policy prescription in the wake of the crisis, if regulators did not change rules, and if the forecasters did not change their model.

But mildness plus the curiosity to raise questions, positive and encouraging contributions, respect for the limits of knowledge as well as of policy were the dominant reactions, and they will last longer. As will our memory of Kurt Rothschild.
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Peter Mooslechner*

“Let's just take a look at what we’ve got...”

Moving between Disequilibrium and Paradigm Shifts on the “Ladder of Understanding”
with Kurt Rothschild

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How did Kurt Rothschild shape economic thinking in Austria? Quite certainly he did not influence economics and economic policy understanding and thinking through public relations and media coverage – that was not his style. Much rather, he stood for certain qualities and took specific views in his general approach to economic issues. Rothschild stood for these qualities and espoused these views consistently in all his activities dealing with economics and beyond – in his courses, during discussions, on his research agenda, as well as in private conversation. In passing on his convictions, he directly and indirectly shaped the economic concepts of many generations of economists in Austria, their perspectives of economics issues and their understanding of how to apply the tools of economics to tackle with these challenges.

**Relevant Economics, or How to Approach Questions of Economics**

Rothschild left his mark in two different ways: For one thing, he took up relevant research topics – quite a variety of topics, in fact, because his interests happened to be quite broad and because his views of economics went well beyond the narrow confines of the mainstream. If a particular topic were to be singled out from this array, it might well be Rothschild’s lifelong preoccupation with all aspects of the labor market, an issue with which he established, as it were, an “Austrian tradition” in economics. For another thing, Rothschild put a stamp on all research topics he was involved with, above all influencing how good and relevant research should or must, in his opinion, be done. This highly normative view had material and personal aspects, and the personal aspects were just as important as the material ones – a fact which became quickly apparent during discussions with him (Rothschild, 2004). In a nutshell, Rothschild essentially focused on how to approach economic issues.

As a case in point, he considered it eminently important to be calm and reasonable when discussing any issue, even the most incendiary one – for instance the topic of Keynesianism versus monetarism, which was en vogue during some period – and not to “constrain” the discussion by bias or a preconceived notion of the result. A consistent effort to stay objective has always been at the core of the cognitive process, and Rothschild considered scientific progress unattainable without such objectiveness. Even in a heated discussion characterized by preconceptions, the parties involved should try to find an objective basis.

This conviction of Rothschild’s came through in a “piece of advice” he often gave when consulted on a problem or when a student was at a loss what to say during an exam: “Well, let’s just take a look at what we’ve got. Let’s try to put everything on the table and sort it out. We’re sure to find a combination that will take us one step forward.” And that was usually all that he would ask for at that point. In other words, let us try to take a step that is guided by
objectivity and that will bring us closer to understanding the issue at hand – a step that will take us up one rung on the “ladder of understanding”. This might sound simple, but the goals he set himself, and, implicitly, economics as a relevant science, were high (Rothschild, 1991), so high that it was hard to follow him on the way there – and easy to lose sight of him.

In the following, only a few exemplary aspects shall be presented to highlight the approach typical of Rothschild, aspects which are particularly important today. After all, we have entered the fifth year of a pronounced crisis, and it would be interesting to hear how he would have commented on the current situation. In fact, he did make a few comments on this (e.g. Bürger – Rothschild, 2009; King – Rothschild, 2009), but one can certainly infer from his fundamental understanding of economics as a science quite a lot of things that he might consider important today.

The World as a Succession of Disequilibria

The key issue is that Rothschild always considered it paramount not to think about the world of economics as a succession of equilibrium states. Quite the opposite: You can only understand the world if you pursue a “disequilibrium approach”. This view embraces numerous components that should give us something to think about, especially during the crisis, and that underline the importance of this alternative approach for the real world. Time and again, Rothschild emphasized that the fundamental discrepancy between the theoretical concept which views the world as a succession of equilibrium states and economic policy reality would prove to be a problem in the long run. Good policymaking and sensible economic policy principles are impossible if the theoretical framework on which they are based does not admit the existence of the very imbalances one is confronted with in reality. Rothschild’s most famous example of such a discrepancy is his article “Arbeitslose, gibt’s die?” (roughly, “The Unemployed – Is there such a Thing?” Rothschild, 1978), a title that is to be interpreted as an intentional exaggeration of the basic question but that also reflects his subtle British-style humor.

As a university teacher, Rothschild insisted on having neoclassical economics taught and having students understand the theory, understand and use the (equilibrium) models, because good command of the models is indispensable for dealing with economic policy reality in a meaningful way. At the same time, he emphasized that the models were based on highly mechanistic equilibrium concepts that had very little to do with reality. Looking at how researchers use dynamic stochastic general equilibrium models (DSGE) to make forecasts today – right in the middle of the worst crisis since the Great Depression – Rothschild would not have been surprised at the result, a result that one could have expected from the outset,
namely that econometric estimates will always produce a new equilibrium in the future, irrespective of whether the crisis continues or not. And that is exactly the right point at which to ask where the value of such an approach is.

This does not mean that Rothschild intended to suggest that equilibrium concepts are worthless per se – one should simply know what they are good for and specifically how to integrate them into a realistic economic policy concept. What would truly be needed, however, is a theory of permanent disequilibrium. That is exactly why Rothschild’s book on disequilibrium theory (Rothschild, 1981), perhaps that work of his which comes closest to being a textbook, tries to comprehensively present the state of the research on disequilibrium theory. Of course, Rothschild was aware that disequilibrium economics was still far from having a fully developed, sustainable model. But if the mainstream of the economic profession does not consider such research important and does not work on such a model, it just will not evolve automatically, no matter how relevant the topic may be.

Why was this disequilibrium view so important to Rothschild? The reason was that he was convinced that there are two relevant approaches to sensible economic policy: On the one hand, economic policymakers can try to generally and fundamentally change the framework conditions of economic activity, i.e. act very much like social planners. On the other hand, economic policymakers can concentrate more strongly on process-oriented economic policy, for example by implementing what is referred to in a simplified fashion as Keynesianism, namely to directly intervene in economic processes. When trying to establish which solution was better or more adequate in a given situation, Rothschild himself went back and forth on his assessment and weighting of options (Rothschild 1989). Possibly, he was a system-changer at heart, but deferred to, or had to defer to, reality. In all probability, the only short- and medium term measures that can be realized under the given conditions have to be rather process-oriented economic policy measures. For this reason, it would be particularly fascinating to discuss these issues with Rothschild today in an economic policy reality in which practical economic policy measures seem to have been mostly exhausted or have at least arrived at a watershed. As the comprehensive reform of EU economic governance has shown, to cite just one example, quite obviously, fundamental measures are required to stabilize the system.

Financial Market Developments Exemplify Structural Change

Rothschild emphasized the importance of financial markets as a keyfactor, less in his writing, but all the more so in discussions. Financial markets are both a key element in the long-term structural change of our economic system and a primary source of destabilizing shocks in the
short run (Mooslechner, 2011). Rothschild never wrote extensively or regularly about the financial markets, but he had detailed knowledge about what was happening in the financial markets. Nevertheless, he personally believed that he knew too little, so he never really wrote an academic publication about the financial markets. This did not stop him from voicing very well-informed opinions about financial market developments in private discussions, and, as was typical of him, he argued his points forcefully and stringent.

Rothschild was convinced that, in the end, financial market developments were very closely linked to the issue of disequilibrium and to the need to base economic policy on the concept of disequilibrium. The reason disequilibrium should be the starting point for policy is that crises and instability represent the normal course of economic life, and normal life is what economic policy-oriented analysis should be based on, not on a theoretical concept that will apply only under specific, highly abstract premises. As Rothschild believed that every economic concept worth its scientific salt has to play a useful role for society as a whole, the concept should relate to economic reality. Economic theory and economic policy should try to contribute at least a little bit to putting or keeping the economy on the right track.

Rothschild’s contribution to this precept was to draw attention to distributional issues (Rothschild, 1993). It was always fascinating, original and hardly inferable from the literature how rightly he identified distribution problems in various aspects of economic reality, e.g. inflation (Rothschild, 1972). His insight was not just that inflation can and does have massive distribution effects, but rather that the development of inflation as a phenomenon is to a significant degree determined by distribution problems.

**Constantly Challenging One’s Own Paradigm**

Rothschild’s approach to economic understanding culminated in the key notion that the paradigm shift in economics as a science is the decisive starting point for progress (Kuhn, 1967). He interpreted “paradigm shift” as meaning that researchers should strive to accomplish a paradigm shift with everything they intend to achieve with academic research, as the effort to bring about a paradigm shift is the only true source of substantial research progress. For Rothschild, “paradigm shift” did not simply mean e.g. challenging the neoclassical paradigm and replacing it by another paradigm. Instead, he consistently emphasized how important it was to always question one’s own paradigm. Only then would it be possible to actually achieve research progress with one’s own work. It may well happen that a researcher finds himself affirming the original paradigm, but at least then he has understood it at a deeper level than when he began. Researchers must always strive to overcome the limits of their own paradigms.
Let me conclude with a very personal observation on a topic that could be discussed at length and that is the key to why and how Rothschild has left his mark on generations of economists in Austria: When I was ready to leave for university and decided to make a go of it in economics, I took a closer look at all Austrian universities that offered economics in their curriculum. Even though I had no real previous knowledge, I immediately realized that there was only one cutting-edge economics program in Austria: the economics curriculum designed by and taught by Kurt Rothschild in Linz.

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Johann K. Brunner

Kurt Rothschild: Founding Professor at the Department of Economics at the University of Linz

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The appointment of Kurt Rothschild as the first professor of Economics at the newly established University of Linz (then called “Hochschule für Sozial- und Wirtschaftswissenschaften”) in 1966 was indeed a lucky chance for the Department of Economics. He represented a style of modern economic research which was rather rare at that time in Austria.

Due to his emigration to Scotland and the start of his academic career at the University of Glasgow, he was familiar with economic research at an international level and as a founding professor he was influential enough to shape the Department accordingly. He taught new theories (not only Keynesian macro- but also standard microeconomics) and invited eminent international researchers (like Joan Robinson and Walter Weißkopf) to Linz, so that students got a firsthand impression of their ideas. He kept in close contact with Gottfried Bombach of the University of Basel, who received an honorary doctorate from the University of Linz in 1983 and died in the same year as Kurt Rothschild.

With his international relations and his open-mindedness, Kurt Rothschild had an important influence not only on the Department of Economics but on the whole University, where he served as rector in 1971 – 1972. It should be stressed that in the 1960’s the intellectual climate at Austrian universities was very different from what it is now. Universities at that time were dominated by strict conservatives and even German-nationalistic professors, after the big drain of the Nazi-era; an international orientation was certainly not standard at Austrian economics departments. On the other hand, however, it should also be mentioned that Rothschild’s habilitation at the University of Vienna was massively supported by Theodor Pütz, a Professor of Economic Policy. Being a conservative-liberal academic himself, Pütz was impressed by the excellent research of the left-wing Rothschild and achieved acceptance of his habilitation against severe resistance in the faculty.

Clarity in thinking and writing is an essential characteristic of Rothschild’s work, and this was also what he requested from students and younger colleagues at the Department of Economics. As a consequence, the obligation to present a paper in the seminar which he supervised together with Kazimierz Laski, produced significant stress among the participating students. And for all his placidness, there were (rare) events when Rothschild could indeed get upset if he came to the conclusion that students only pretended to be familiar with the models they were talking about. (As Governor Nowotny explained, the reason for Rothschild’s strictness was his view that the university should indeed reward personal merits, as opposed to other institutions where a student’s social background is of primary relevance.) I would like to add that when supervising students’ papers and presentations myself, I often reflect on the appropriateness of the standards I request. That is, I ask whether I devote
sufficient effort to reading, correcting and discussing students’ papers (and everyone knows that doing this properly requires a lot of effort).

A further important impact of Rothschild’s activities at the Economics Department in Linz came from his view on what constitutes relevant economic research. (The characterization given by Gunther Tichy on the occasion of Rothschild’s retirement from Linz in 1985 has rightly become quite well-known in this respect.) He certainly considered problems of the labor market, unemployment, the wage level, the distribution of income, and similar issues important topics of research. In the 1980’s he initiated, together with Gunther Tichy of the University of Graz, the research project “Dynamics of unemployment”. This was the first project in the social- and economic sciences financed by the Austrian Research Fund. In this project, economists (most notably Reiner Buchegger and Martin Riese) and sociologists collaborated, which demonstrates Rothschild’s preference for an interdisciplinary approach that he expressed on several occasions. This project was not only successful from its research output, but also offered the first job opportunities for a number of today’s well-known economists such as Josef Zweimüller (University of Zurich), Viktor Steiner (Free University Berlin), Ingrid Kubin and Wilfried Altzinger (both WU Wien), as well as Rudolf Winter-Ebmer (University of Linz). Looking at their work and their fields of research, one can certainly detect several traces leading back to their involvement in the Rothschild project.

Indeed, a particularly close relation can be detected between the Rothschild-Tichy labor-market project and the present National Research Network “The Austrian Center of Labor Economics and the Welfare State”, again financed by the Austrian Research Fund and headed by Rudolf Winter-Ebmer of the University of Linz, with a number of collaborating Departments in Austria, Germany and Switzerland. Here the lasting impact of Rothschild’s activities in Linz is clearly visible. But even more generally I would claim that the current research interests of the members of the JKU-Linz Department of Economics still reflect Rothschild’s preference for topics of relevance for economic policy. This is true not only for labor economics but also for teaching and research in other fields like international trade, industrial economics, health economics, and also for my own (though sometimes rather theory-oriented) activities in public sector economics.

In my view, a very important aspect in Rothschild’s thinking was his emphasis on pluralism in economic research. I remember well his talking about the toolkit of economists; he was certainly not a dogmatist. Time and again he insisted that insights from other disciplines like psychology or sociology should play a much more important role in economic research. Perhaps, one may regard the recent uprising of fields like experimental economics, behavioral economics or even neuro-economics as a step in the direction he suggested, even if,
surprisingly, the direction seems to have been the other way round, namely that economists enter the neighboring disciplines. These new insights severely undermine the model of rational behavior of individuals, though the actual consequences for how we view the functioning of market economies are not yet clear, and within most fields of the economic discipline it seems that the idea of pluralism has not really arrived; standard models and their variants, known to have a weak empirical basis, dominate journal articles.

Let me come to a final point: In spite of his clear moral position that the first goal of an economic system is to improve the life of the underprivileged, which governed his research interests, one can in my view not claim that Rothschild belonged to a certain “school” in economics. He was certainly in favor of Keynesian macroeconomics, but I remember well discussions when he defended the insights of neoclassical micro. He was a brilliant critic of dogmatic attitudes and of scientific covering-up of individual or group interests. But at the same time he was – as already mentioned – open for different methods of economic research. When it comes to economic policy he clearly favored measures to avoid unemployment and to increase income equality, but to my knowledge he hardly expressed a comprehensive personal vision of how an economy should be organized and what its governing principles should be. Maybe – but now I am obviously speculating – this had to do with his sharp intellect which quickly revealed to him the limitations of any scientific approach and let him never fully identify with a particular idea.
Herbert Walther*

Kurt Rothschild: A Personal Recollection

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Encountering Kurt Rothschild at what was then the University of Social and Economic Studies in Linz was to prove absolutely crucial for my future life. For, had it not occurred, I would certainly never have studied economics.

Coming as I did from a classical grammar school, I had no real idea of the subject, whereas I did have a serious interest in philosophy and sociology. I had read the first social science books I can recall during my early teens in my home town of St. Pölten, which – to my good fortune – boasted a well-stocked and very cheap public library. Above all, I remember Rene König’s ‘Sociological Lexicon’, which, by leading me into a new conceptual world, left a particularly strong mark; Hofstädter’s volume on Social Psychology; Galbraith’s ‘The New Industrial State’; and works by Jung and by Schreiber (‘The American Challenge’).

At that time, sociology was a flourishing discipline, undoubtedly also a ‘fashionable’ one, and I knew that it could be studied at the University of Linz, whose young, park-like campus I first visited in the summer of 1968.

It was a visit I shall never forget, so impressed was I by the welcoming atmosphere. Quite unlike that of the Vienna universities I had run my eye over in July of the same year, where, in the stifling summer heat, the dust of centuries seemed to hang and most doors were firmly shut. Here, instead, everything was freshness and light, everywhere was glass, air, openness.

The green, blissfully peaceful campus, village-like in its scale; the short distances between lecture halls and residences; and, last but not least, the fact that, unlike Vienna, Linz was undeniably too far from St Pölten for me to lighten the family budget by commuting to study: for all these reasons, my choice of university was made on the spot.

In the eyes of my freshman self, there was just one drawback, which today I recognize as a further boon. In the first two years of my degree I had to take a whole range of subjects with no relation to sociology: from accounting, to various aspects of law, to mathematics and statistics.

One particularly strange subject was economics. It seemed ‘strange’ because of the very first class in microeconomics. There a small, rather odd lecturer, first, virtually covered the board with his writings, and then attempted to fill in the few remaining free spaces with diagrams as microscopically small as they were complex. From my seat in one of the backmost rows, through my 8-diopter-strength glasses, I gaped in bewilderment at one of the earliest works of modern graffiti art. Finally, when – as frequently happened - the lecturer himself had become hopelessly lost in the havoc of his tiny chalk scratching, he would casually wipe away the sum
of his artistic endeavours with the sleeve of his jacket, only to begin yet another diagram over the still visible remains of his previous efforts.

The small, odd lecturer was, of course NOT Kurt Rothschild but one of his colleagues, who had made his name above all – what irony - in the economics of education.

Even my first encounters with sociology turned out to be much less stimulating than I, in my early enthusiasm, had hoped. Right at the start of my first course I had to write a seminar paper somewhat pompously entitled ‘Structure and Function in the Ideas of Talcott Parsons’. The experience awoke in me the first dark suspicion that abstract sociological theory is actually the art of using abstruse terminology to further cloud the layperson’s understanding of connections that are ill-defined and, by their very nature, hazy, to the extent that rediscovering them (‘what did he really mean by that?’) becomes a task sufficiently arduous as to cause a genuine sensation of academic insight.

Today, as a grateful pupil of Kurt Rothschild’s, I am of course aware that this somewhat presumptuous, self-referential type of theorising can also be found in some areas of theoretical economics, at best much more elegantly disguised by the use of mathematics. Allan Kirman, the highly regarded exponent of general equilibrium theory, once remarked in a research retrospective of his own esoteric field that, at its conferences, he often seemed to himself to be a member of some sect that had gathered on top of a mountain to await the end of the world. I presume that one might experience similar feelings at a conference on, for example, the pioneering works of Parsons (or Luhmann).

Up in the clouds were also to be found some heads affiliated to the Department of General Business Studies, where a spiritual follower of Spann’s holistic school worked away, with undeniably artful rhetoric, at his conceptual castles in the air. Two gems from his lectures have remained always with me. The first is his definition of the ‘essence’ of a loan as “giving something in the confidence of receiving it back” – and who would contradict this profound insight in our time of financial crisis? The second quote that has stayed with me represents an unambiguous rejection of the open nature of our Anglo-Saxon-tainted, hectic academic existences: “Those who feel at home with themselves have no need to travel.”

At any rate, only a relatively short time into my studies any joy I felt at intellectual contact with all this woolliness had largely disappeared, to the extent that I began to seriously consider changing my degree course. As an escape route I would even have considered dry-as-dust Law or the new degree in Economic Statistics, so strong was my yearning for something ‘to sink my teeth into’. After all, after a year of study I was still not in a position to
give anyone who asked me what I was actually studying a succinct answer that was either reasonably satisfactory or half-way honest.

And then, all of a sudden, I found myself sitting in one of Kurt Rothschild’s macroeconomics lectures. Right from the start I was fascinated by his personality and soon my choice was made: I would switch to economics.

With Rothschild there were no bogus depths of meaning, no conceptual hair-splitting. Instead he presented theories clearly, with no sign of pretentiousness, and so managed to induce a genuine feeling of insight. He did not use his theoretical models to instil in his students a belief in universally valid ‘natural laws’ of the economic world. Far less did he wish to dazzle us with complicated mathematics, even if he made use of formal deduction whenever it seemed useful and appropriate. But he always made explicit the restrictive assumptions on which a particular model was based, in order to forestall any rash belief in the general validity of its hypotheses.

From the very start he was at great pains to get across the idea that not even the conceptual constructs of economic theory can be fully objective, that they contain an element of ideology and value judgement, just like the theoretical ideas on which all constructs are inevitably based. His altogether hostile reactions to concepts like ‘natural’ unemployment, ‘equilibrium’ or ‘Pareto efficiency’ all derived from this extreme sensitivity to ideological influence.

Kurt Rothschild detested the notion of the economist as ‘high priest’ or ‘preacher’, sadly and too often adopted by famous practitioners and political advisors these days, and not only because he was himself so modest. Instead, he saw the economist as a sceptical son of the Enlightenment, whose task it was to point out the various possible consequences of a particular course of action. Prioritising different aims, the choice and implementation of particular economic policies; these were, for him, a matter for democratically legitimated political decision-makers. In that connection, I recall a sentence of Rothschild’s that I like to quote in my own classes: ‘Anyone who claims there is no alternative has certainly got something to hide’. Words which, incidentally, he spoke long before Margaret Thatcher’s famous – or infamous - TINA entered the political stage.

Over and over again Rothschild stressed that economic theory can only be understood against the background of the socio-economic conditions under which it was developed. He liked to quote, often and approvingly, philosopher Hans Albert’s criticisms of ‘model Platonism’, that is, the retreat of neo-classical economics from empiricism into ‘pure’ logic. Albert speaks of the spatial and temporal relativity of all so-called ‘economic laws’, a view that Rothschild
illustrated in masterly fashion in his lectures on the history of economics. His immunity to preaching dogmatism in any form, his scepticism towards so-called ‘general theory’, were also presumably based on his long experience as an empirical researcher (in the words of the Polish satirist Jerzy Lec: ‘Reality is the enemy of truth’)

A further debt that my fellow students and I owe, indirectly, to Kurt Rothschild is our encounter at that time with another teacher who left a greater mark on me than others did. Kazimierz Laski, pupil of and assistant to the world-renowned economist Michael Kalecki, had been expelled from Warsaw University in 1968, the victim of an evil anti-Semitic campaign directed against dissident spirits of all types. His path took him first to the Vienna Institute for International Economic Studies, and then to a chair at the University of Linz, where his classes were of immense intellectual value to us students, for two reasons. On the one hand, because he came from an utterly different economic world, largely unknown to us, that of the planned economy, whose weaknesses and absurdities he laid bare in example after example. And, on the other, because his lectures – which ranged from growth theory to the economic cycle, from the theory of planning to Marxist economics – were pedagogically brilliant and clear as crystal, markedly more formal and analytic than Rothschild’s own, but also more firmly rooted in a paradigm than anything we had heard before.

Every time a model was presented in one of our higher seminars – which were sometimes attended by more staff than students – it led to lively discussion between the two. They were fascinating experiences because, time and again, we were shown how even the most elegant of micro- and macroeconomic models were exposed and vulnerable to well-founded criticism. Whereas Rothschild considered each problem from many different perspectives, circling around it in a series of daring pirouettes, Laski preferred to attack it head-on, striking straight at its very heart, with his feet firmly planted on his Kaleckian foundations. Of course, given two such different approaches, sparks tended to fly.

I won’t hide the fact that, as students and perhaps even more so in our subsequent teaching and research activities, we have had our occasional problems with the relativist approach to theory propounded by Kurt Rothschild, who, now as then, seems always to be looking over our shoulders. The resultant insecurity was undoubtedly one reason why those of us who dared to do our doctorates under his supervision took rather longer than was truly necessary to complete them ... How much simpler our academic lives would have been, had we at their outsets been impregnated with unquestioning belief in a single, standardised paradigm, in a handful of universally valid axioms, above all in the magical powers of mathematical formulae!
Kurt Rothschild’s methods – which shine through in all his essays, with their wealth of ideas and their verbal immediacy - were unique in their cogitative approach to argumentation, in their critical reflection, and in the almost philosophical way in which he approached and investigated a problem from every – yes, every– side. As such, they do not lend themselves to imitation. And, indeed, his work has nothing in common with the constant stream of models emerging from the narrow axiomatic foundations of contemporary economic orthodoxy, models which are then used to ‘explain’ the whole economic, political and social world, presumptuously and nuance-free, but in a formally ‘correct’ manner (that is, purely on the basis of neo-classical equilibrium models, ignoring the devilish ‘ad-hoc’ hypotheses so beloved of Rothschild).

Yet, since the financial crisis - if not before -, most economists have sensed that the emperor of ‘Modern Advanced Economic Theory’ has few, if any, clothes. If, in the past, they had paid more attention to Kurt Rothschild’s unfailingly constructive criticism, some problems might have been recognised earlier, certain ideas not stretched beyond their limits. And certainly some utter nonsense, such as the absurd Real Business Cycle theory, or the theories of rational expectations and perfectly efficient financial markets, would never have been taken so seriously.

Kurt Rothschild, we shall miss your words of caution and enlightenment.
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